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BRIEF

Presented by

DENTAL SERVICES REVIEW COMMITTEE

to

THE MINISTER OF HEALTH
NOVA SCOTIA GOVERNMENT

Halifax, Nova Scotia **December 31, 1982**

Dental Services Review Committee

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December 17, 1982

Honourable Gerald Sheehy, D.V.M.
Minister of Health
Province of Nova Scotia
Halifax, Nova Scotia

Dear Dr. Sheehy:

The Dental Services Review Committee takes great pleasure in presenting its final report.

Over the past eighteen months we have investigated the many facets of oral health. An attempt has been made to correlate the responsibilities of government, the dental profession and the public. Rather than simply study the present situation and suggest "band-aid" solutions, we have attempted to project to the 21st century.

This has been an interesting task. We thank you for the opportunity to serve on this committee. It is our hope that we have been able to present a comprehensive report which will make a contribution to improvement in the field of oral health.

Sincerely,

Dental Services Review Committee

J.D.W. Walker
Chairman

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PREFACE

The Dental Services Review Committee was formed under directive of the Honourable Gerald Sheehy D.V.M., Minister of Health, Province of Nova Scotia. The Committee began its investigation July 1, 1981, with a report due December, 1982.

The terms of the reference of the committee were stated as follows:

a) Review progress in the dental care field since the 1972 Task Force Report:

b) Advise on priorities and resource allocation within the field of dental care services:

c) Inventory dental manpower and project future dental manpower needs;

d) Evaluate the role of the allied dental care personnel in the dental care field;

e) Review all provincial dental manpower legislation and make recommendations on the development and modification of legislation;

f) Assess present dental care services and insured programs of dental care;

g) Advise on the development and improvement of standards in all dental manpower groups;

h) Advise on the financial implications of any proposals.

Such an investigation would be impossible without the cooperation of many individuals and groups. The Committee expresses sincere appreciation to the various professional societies, government agencies, citizen groups, political parties, labour organizations and individuals who assisted in this study.

The Committee is unique in its composition in that none of the three members of the Committee are involved directly in the delivery of dental health care in the province, nor do they have any previous experience in this area.

This would account for a longer period of familiarization with the relevant issues in the delivery of dental health care to Nova Scotians. The absence of any preconceived notions of how the system should work, and of what role the different components in the system should play, will result in a more balanced, unbiased report to the Minister of Health.

The committee has placed, as its main objective, service to the public. Protection of the oral health professions, must always be secondary to the welfare of the public. It also stands to reason that the protection and well being of the total oral health profession is more important than any one discipline or individual.

We will present proposed solutions to the problems facing Nova Scotians in the field, as we move into the mid - 1980's and prepare for the 21st century.

We have been concerned with the extreme changes in the provincial and federal financial situation that has taken place since July, 1981. Some of our recommendations are, therefore, made on the basis of "when the financial situation improves".

The committee is as follows:

J.D. Walker, Bridgetown, N.S. Chairman	School Administrator
C.R. Baxter Jr., Halifax, N.S.	President, Baxter Equipment (1980) Limited
M.D. Stevens, Second Peninsula, N.S.	President M.D. Stevens Limited

Staff Personnel

P.J. MacKeigan, Halifax, N.S. Daley, Black and Moreira	Legal Council
Carol Howlett, Dartmouth, N.S.	Secretary
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CHAPTER I

BASIC PHILOSOPHY

The Dental Services Review committee has met with the various Associations and Societies within the field of oral health. We were impressed by the sincerity of each group in their common objectives of serving the public good.

Dr. Gerald Turner, President, of Nova Scotia Dental Association has presented a basic philosophy which, we believe, has been expressed by all disciplines within the oral health field. (see appendix 17).

The Dental Services Review Committee believes that for people of Nova Scotia to obtain high quality oral health care they must be protected. Protection implies two concepts. First, aspirants to the oral health delivery system must receive high quality training. Second, some mechanism must exist to guard against any potential human failing when these practitioners begin to services the oral health needs of the public of Nova Scotia. These two concepts are not mutually exclusive. Indeed, they are interdependent and must operate in conjunction if the people of Nova Scotia are to enjoy high quality oral health care.

With public protection in mind, participants entering the oral health care delivery system in Nova Scotia must meet the following criteria:

High quality training:

1) their training must take place within the confines of an accredited post-secondary educational institution.

2) their training program must be periodically accredited by the appropriate regulatory body.

3) the curriculum for their program must be approved by the appropirate regulatory body.

4) all students must successfully complete the training program to be eligible to practice.

These are the post graduation public protection criteria:

1) a Peer Review mechanism must be in place.
2) a manual outlining Standards of Practice and Code of Ethics must be established.

The Dental Services Review Committee had one of two choices toward its mandate. We could either assess present problems and apply quick, "band-aid" solutions or prepare a course of action leading to the year 2,000.

Had we decided on the "band-aid" approach, there is no doubt that another investigation would be necessary within the next five years. Consequently, we decided to look to the future and make recommendations which will serve oral health needs into the 21st century.

Our deliberations stressed an order of priorities:

1. the public good
2. the professional good
3. encouragement of co-operation between the various disciplines within oral health services
4. individual responsibilities
5. government responsiblities

CHAPTER II

OVERVIEW OF NOVA SCOTIA ORAL HEALTH SERVICES

Progress of Dental Services in Nova Scotia since Task Force, 1972

The Committee has had an opportunity to make an extensive review of the progress in the dental care field since the 1972 Task Force Report and would make note of the following major accomplishments:

1) The completion of the new Dental Faculty Building, Forrest campus, Dalhousie University. This has led to an increase in the number of students being accepted for training each year.

2) The opening of a Dental Facility at the Nova Scotia Institute of Technology for the training of Dental Technicians and Dental Assistants.

3) The opening of the Nova Scotia School of Denturism at the Dartmouth Regional Vocational School.

4) The disparities which have existed in Nova Scotia compared to other parts of Canada are being alleviated by the training of additional dentists and other dental auxiliaries.

5) The Children's Dental Program which was recommended by the 1972 Task Force has been implemented and the number of children treated under the program is 88,400 or 48.3% of the 183,000 insured. The cost of the Children's Program has increased from approximately $2,000.000 in the initial year to $8,333,501 up to March 31, 1982 (see appendix 5).

6) The Cleft Lip and Palate Program was implemented on December 1, 1977 and provides services to persons diagnosed as having a cleft palate. (see appendix 1)

The plan, when originally implemented, had a limit based on oral rehabilitation. The limit in the future, as determined by the Health Services and Insurance Commission, will be age 23.

Nova Scotia residents registered under MSI who have a congenital cleft lip/palate deformity, and have been registered with the Cleft Palate Clinic at the Izaak Walton Killam Hospital for Children, are eligible for insurance under the Cleft Palate/Lip Program.

The program has cost the province of Nova Scotia a total of $487,377.00 to March 31, 1982. (see appendix 5).

7) The 1972 Task Force considered the matter of the legalization of the activities of denturists. The resultant recommendation was that a selected number of competent and qualified denturists could provide a certain specified range of prosthetic dental services to members of the public. The denturists have opened offices throughout the province and continue to provide prosthetic dental services to members of the public both inside and outside the law.

8) The most effective measure currently available for the prevention of the most common of dental diseases, dental decay, results from the fluoridation programs, particularly the fluoridation of public water supplies. The ten years since the first report have reinforced this fact and the recommendation of the first task force. The province has done little to urge every community in Nova Scotia to take steps to fluoridate its public water supply. (See Appendix 20).

Oral Health Services

The oral health services being provided to the people of Nova Scotia have been in a state of change and up-grading over the past few decades. New technology has made a dental visit far less painful. Dentists have placed more emphasis on preventive dentistry - the preserving of teeth through knowledgeable dental health.

Public education concerning oral health should become a priority item of dental associations and government. This could be done primarily via the mass media and public schools. The use of fluoridated water needs to be emphasized.

Oral health services now include, along with the dentist, (in alphabetical order) dental assistants, denturists, hygienists and technicians. Each discipline has a role to play in the total oral health service package. Mutual respect and confidence are lacking at the present time. However, these disciplines have recognized this problem and have shown a sincere desire to correct this situation.

In striving for the objectives of quality service and public safety, the various disciplines must maintain high quality education and professional ethics. The public good must always be placed on a higher priority than individual professional status.

One major concern to the committee is the problem of oral health services to the aged and handicapped. The dentist cannot, generally speaking, make house calls. All too often, dental offices are above ground floor level. Ramps or other necessary equipment needed by the handicapped are not standard equipment.

When the problem concerns dentures, it is generally the denturist who is willing to go to the patient to provide service. It should be noted that denturists' legislation only permit work in denture clinics. If they go to an old age home they are violating the act.

There can be no questions that the dental profession must face the problems of accessibility, conveniences, and affordability for the public. The senior citizen and the handicapped are growing problems seeking solutions. (see appendix 2).

The concerns of senior citizens in the field of dental care may vary in accordance with the relative degree of independence experienced by the individual senior citizen, i.e. living on their own, or in an institution. However, most senior citizens have to face the problem of stretching a fixed income to meet their monthly bills and daily needs with the result often being a noticeable absence of any definitive dental care. The problem of providing adequate dental care under a fixed income would be the primary dental concern because of the relatively high cost of such a basic service.

The Halifax Senior Citizens Housing (Corp. Ltd.) recently sent some pamphlets to the Health Minister's office, providing information on a U.S. study of providing dental care in the senior citizens' institutions. Included are recommendations on how to better provide dental care within the special care homes of the province and a short description of the program still in the formative stages at the Northwood Home for Special Care (see appendix 3).

Of course, not all senior citizens are in nursing homes. The trend is towards staying in your own home as long as possible, maintaining personal independence and dignity. An increasing percentage of the population are those 65 years of age or older, with the vast majority on fixed incomes. Though it may be repetitive to state as such, the fundamental problem for these people is to be able to budget money for dental service when the day-to-day living expenses have become so unbearably high. (see appendix 11).

Oral Health Concerns

The Committtee has been surprised and somewhat alarmed at the feelings of mistrust and suspicion found among the various disciplines within the oral health field. A mutual respect and trust must replace the poor professional rapport which is all too evident at the present time. Somehow the public interest must come before narrow self-interest.

Times change, conditions change and attitudes must change to keep pace with new technology and resultant professions. The various disciplines often pay "lip-service" to serving the public good, then hide behind a narrow professional stance anytime something or someone is perceived to be a threat to self-interest.

The medical profession must recognize that oral health is part of physical health. Therefore, it is incumbent upon the medical doctors and hospital administrations to seek the advice of dentists as the need arises. In addition, hospital facilities must be made available to dentists, whenever necessary, for patient welfare.

The dentists in turn, must recognize the role played by denturists, dental hygientists, dental assistants and technicians in the modern dental health package. These roles,each different in its own way, should be equated on a basis of equality. A spirit of co-operation and mutual respect will serve the public good by providing a united, viable oral health team approach.

The committee spoke with Dr. A. Thompson of the Health Care Instruction section of the Department of Health. He indicated that the number of facilities in the province could vary according to one's definition of "facility". He did, nevertheless, provide some breakdown on what services were available.

There are four fully operative dental clinics in the province, all of which are located in the city of Halifax. The Victoria General, Halifax Infirmary, Izaak Walton Killam (Children's) and Camp Hill all offer such services with resident oral surgeons. The Izaak Walton Killam includes the Cleft Palate Clinic.

Dr. Thompson had to be less precise when speaking of dental facilities in hospitals outside the Metro area. He noted that Sydney has an oral surgeon who probably works out of both hospitals in the city but not out of any permanent clinic. Also, the presence of an oral surgeon is essential before any question of a perm.nent clinic can be considered.

The Department of Health tends to be cautious when providing facilities and/or equipment to the local hospitals throughout the province, although Dr. Thompson believes that most regional hospitals have some sort of arrangement to provide limited dental care on an outpatient basis. For example, some hospitals such as Kentville and Yarmouth have been provided with what is known as an ADCO cart, a portable dental cart with hookups for drills and suctions. These are usually made available on request. Yarmouth Hospital at the moment has a panarex X-ray machine which takes complete X-rays of the mouth. This was provided on a fee-for-service basis when the dentists in the area decided that while they couldn't afford to purchase one individually, the need for one was certainly evident. Dentists merely refer any patients who require X-rays to the hospital and the government is reimbursed for the service provided.

Dr. Thompson assures the committee that the approach of the Department of Health in providing dental care in hospitals is not etched in stone, but the use of general anethesia in outpatient hospital care is not encouraged.

While recognizing that there is a legitimate argument for providing a certain level of dental facility on an outpatient basis, the question remains

on just how extensive this facility should be. According to the nature of dental problems, the number of patients treated on an outpatient basis should not be extensive if utilized in a normal fashion. The province is not in the business of providing a free dental office in which to hold an ongoing practice.

Obviously, it is difficult to establish the number of hospitals equipped with dental facilities and/or equipment. Most regional hospitals throughout the province would provide some sort of limited service, whether it be a chair for examination, or an ABCO cart with the basic equipment hook-ups.

Manpower

For many years Nova Scotia has experienced a shortage of dentists. This has been particularly true in the rural areas of the province. Here the combination of a small population and a limited appreciation of dental services deter most dentists from establishing rural based practices. This helps explain the sporadic availability of dental services in rural areas and the inability of certain remote areas to attract and maintain a full-time dentist.

However, developments over the past few decades have slowly altered the situation. Consolidation of schools, an improved highway system and the mass media have increased people's awareness of the importance of good dental care and ready access to a dental practice. The implementation of children's dental program in the mid-seventies created further demand for full-time dental service.

A number of changes occurred which helped in meeting this demand:

1) Hygienists began to assume a more active role in the dental office, resulting in the dentist having to spend less time in such areas as the examination and cleaning of teeth.

2) Denturism was recognized by the government as a legitimate discipline in the construction of complete upper and lower dentures.

3) The increased use of dental assistants further improved the overall efficiency of the dental practice.

4) Improved equipment, materials and methods have also assisted the dentist in improving the efficiency and effectiveness of a practice.

5) Use of hospitals under MSI has resulted in safer, more professional treatment for problem cases such as the extraction of wisdom teeth.

As the demand continued to increase, the need for a new expanded Dalhousie Dental School became evident and finally came to pass with the official opening of a modern school in 1982.

The new facility has increased the number of graduates from 24 in 1978 to a projected class of 48 for the 1983-84 semester. With the potential to expand to a total of 56 dental students per year when fully operative, the number of potential graduates coming into the field has increased dramatically in a very short time. This school serves all of Atlantic Canada. The committee is concerned that the saturation of practising dentists, which is now causing problems in British Columbia and Ontario, may soon occur in Nova Scotia if the situation is not carefully monitored.

Nova Scotia, according to the latest data is still plagued by a dentist-to-population ratio substantially higher than the national average. However, some progress has been made over the past decade in increasing the number of dentists available to the people of the province. The following table gives a general overview of the extent of dental progress in Nova Scotia over the past two decades.

Region	Ratio	1961	1971	1981
Canada	1	3,167	3,046	2,247
British Columbia	1	2,491	2,339	1,674
Ontario	1	2,536	2,544	1,969
Nova Scotia	1	3,879	3,687	3,104

(Historical trends in the supply of Dentists and Dental Hygienists in Ontario - Lewis, Wollis, Lines; June, 1979) Hann, H.J., Dental Manpower Growth in Canada - How will it affect the dentists market place. (Ministry of Health, British Columbia, June 1982).

Note: Armed forces and full-time teaching personnel excluded).

We can see from the table that Nova Scotia advancement has almost parallelled the extension of dental services in the country as a whole, although the national ratio for the 1971-81 period showed a larger more marked change due to a massive increase in the number of dentists in Ontario and British Columbia.

What then constitutes adequate dental manpower for Nova Scotia?

If we use the 1981 Canadian average as an acceptable standard, the number of licensed dentists would have to be increased from the present 273 to 377 - over one hundred additional new dentists in practice. Before examining the implications of such an increase on the state and cost of dental delivery in the province, as well as the profession itself, it would be wise to examine our ability to produce dentists for the region.

Dalhousie Dental School is, of course, the main supplier of dentists for the Atlantic region, being the only such facility east of Quebec. Between the years 1961-81 a total of 464 dentists graduated from Dalhousie, an average of 23 dentists per year.

Statistics indicate that in most years approximately half of the Nova Scotia graduates (when armed forces personnel are excluded) set up practice in Nova Scotia. Obviously, a controlled number of Nova Scotia graduates will be necessary, if any projected target is to be achieved.

Dr. H.J. Hann, in his 1977 report to the provincial government, indicated (using 1976 statistics) that to reach a ratio of 1:2520 by 1986 Dalhousie would have to feed 14 dentists per year into the system. The evident trends in the mid to late 1970's indicated that such a ratio was easily attainable. Considering that Dalhousie has projected 34 graduates for 1981 and an increased number in the following decade, it appeared that Dr. Hann's conclusion would be borne out sooner than expected. Yet five years after his study, we are still 100 dentists short of the amount needed to equal the national ratio at this point in time.

It is possible to project future manpower needs with some accuracy:

Region	1991	2001	Increase
Canada	26,975,000	28,794,000	6.7
British Columbia	3,073,000	3,405,000	10.8
Ontario	9,908,000	10,753,000	8.5
Nova Scotia	913,200	947,600	3.8

Nova Scotia has a projected population of 913,200 by the year 1991. The projected ratio for Canada in 1991 is 1 dentist for every 2,033 people. A similar ratio for Nova Scotia would require a total of 449 licensed dentists by 1991 from the present total of 273 - an increase of 176, or about 18 dentists per year considering attrition.

A total of 18 dentists per year graduating into the Nova Scotia work force is a goal we now view as easily attainable with the recent expansion of Dalhousie Dental School. However, this increase in the capacity of the dental school to produce dentists raises some questions of fundamental importance. For example, is the national ratio a realistic goal for Nova Scotia? Would such a volume of dentists have the adverse effect of driving costs for dental work up as the profession tried to maintain its income level in a shrinking market? Rather than merely increasing the number of expensively trained dentists, we would suggest that the expansion of dental auxiliary programs at the school will be of more benefit for the overall dental health program of the province.

Concern over the number of graduating dentists is not without some justification. The dental profession has raised concern many times over the tight market situation developing in the Halifax-Dartmouth areas. While an increase in the number of dentists might have the effect of forcing

some dentists to follow the laws of supply and demand and thus establish outside of the metropolitan areas of the province, the cost of establishing a worthwhile practice would dictate that even a large rural area could not support many full-time dentists. Thus, any gain from flooding the market with dental graudates would be minimal, short term, and not particularly beneficial to the standing of the dental profession in general.

There also appears to be some contradiction concerning the public perception of dental manpower. In our travels throughout Nova Scotia we discovered the shortage of dentists was not as acute as originally understood. The committee strongly believes that the major problem is one of maldistribution. If one had the authority to take 20 graduates and place them in designated areas around the province, the chronic problems facing dental deficient rural Nova Scotia could be greatly alleviated. (See Appendix 1: - Manpower - Maldistribution).

The use of the 140 dental hygienists practising in Nova Scotia, as well as the ever-expanding use of assistants in dental practices, has contributed positively to the efficiency of the present dental system. It has been suggested that the use of these auxiliaries can increase the number of patients being treated in a practice by over 25%.

It was earlier mentioned that some parts of Ontario and British Columbia are experiencing the problem of too many dentists in some areas. As a result, bankruptcy is of increasing concern to the dental community. Some factors contributing to this unfortunate development are:

1) High cost of money.
2) High cost of setting up practice.
3) Number of practising dentists in urban areas.
4) Changing economic condition of a community.
5) In times of recession, dental services receive low priority from the consuming public.

The committee recognized the difficulty in adapting to the economic circumstances of the day. However, one option is to continually monitor the number of dentists practising in the province. It would naturally follow that the number of graduates from Dalhousie Dental School be closely watched and allowed to fluctuate according to the laws of supply and demand.

Those days when Nova Scotians have been plagued by a radical shortage of dentists are rapidly coming to a close. If anything, the major problem facing the government of Nova Scotia and the profession in this context is the distribution of dentists from urban to semi-urban or less populated areas. This too, appears to be a manageable situation if resources are properly and thoughtfully allocated. It is also becoming apparent that the tendency of Nova Scotia graduates to set up practice in Halifax-Dartmouth must be slowed dramatically if the dentists in the area are to maintain viable practices.

National dentist-to-population ratios, although a good barometer to measure the advancement and expansion of dental services in any given province, should not be used as a target in the Nova Scotia context. It is naive to think that the number of full-time practising dentists could almost double in the next decade without adverse effects on the social and economic standing of the dental profession in the province, and a resultant negative spillover in the delivery of first rate dental services in the province.

It will be recommended that the government of Nova Scotia, in co-operation with the Dalhousie Dental School, re-evaluate the present policy of gradually increasing the number of dental graduates to a maximum of 56 and, instead, aim for a somewhat smaller number. It should be remembered that the concerns over a "glut" of dentists have already been expressed for some time in provinces such as Ontario and British Columbia. It would be more prudent to avoid this problem in Nova Scotia while still possible. Instead, use monies allocated for new dentist instruction for expanded training of allied dental personnel i.e. hygienists, technicians, assistants, and denturists within the Dalhousie Dental School.

A maximum graduating dental class of 36 would produce enough dentists for the Atlantic provinces, given the present rate of attrition (about 2% per year) and the percentage of graduates that annually remain in Nova Scotia to practice.

Public Concern

The Dental Services Review Committee has heard the many concerns of Nova Scotians as we made our province-wide investigation.

A sample submission is included in this report. Mrs. Janet Campbell presented the following brief on behalf of the **Women's Health Education Network** (WHEN). This brief gives a comprehensive summation of concerns not only of women, but all citizens of Nova Scotia.

Introduction

The Women's Health Education Network (WHEN) was founded in May 1979 for the purpose of information-sharing among Nova Scotians concerned with health issues. More than 350 individuals and groups are currently members of WHEN: from the membership a volunteer Board of Directors is elected annually. With a three year grant from the federal Department of Health and Welfare, WHEN maintains an office in Truro, staffed by a coordinator, a field worker and part-time secretary. WHEN publishes a quarterly newsletter and monthly bulletins, and a growing resource library is available to members or the general public.

WHEN is interested in making a submission to this review of dental services for several reasons:

1. Nova Scotian women have traditionally been responsible for the health care of whole families, and particularly for decisions concerning children.
2. WHEN has a strong commitment to cost-cutting through education prevention rather than extension of expensive treatment facilities.
3. WHEN has a particular focus on the health care needs of rural Nova Scotians.

Philosophic Perspectives

a) WHEN supports provision of **quality health** care at an **affordable price** or an **equitable basis.** The dental services system in this province appears to us to have numerous failings in all of these areas.

b) There is an element of personal responsibility and choice involved in dental health care, much more than in other kinds of medical services. Social traditions place varying degrees of value on dental health maintenance: values, decisions and personal habits are a much more significant consideration.

Concerns

1. **Quality Care:**

— What assurances of quality work do we have as consumers? Are there dentists who guarantee their work?
— What are the long-term risks of routine x-rays and fluoridation?
— Should there be a separation between diagnosis and treatment, to minimize potential conflict of interest?
— How can we be assured that recommended treatment is really necessary, especially in the area of children's orthodontics? Mothers are feeling much pressure and guilt in this regard, since the advent of prepaid care for children has removed cost as a factor in the decision to proceed.
— Since quality care should include education for prevention of problems, why is the public health presence so limited? Hygienists are seeing school children only once in two years in many rural areas.

2. **The Price**

— The cost of dental care is far too high for low to average income families, who will seldom choose to spend limited funds on dentistry. Neglect is the consequence.
— Dentists fees are not advertised; we see no evidence of competition. Some specialist's incomes seem outrageously high. Neither individual consumer nor the public purse should pay dentists' fees for cleaning and other routine functions.
— MSI coverage for children's dentistry has improved the general level of dental health somewhat, according to public health personnel. But where does it end? There has never been public discussion on the cutoff age of this program. Are we moving quietly toward total coverage?

If this coverage is to be extended indefinitely, should we not examine the cost implications, and seriously question the fee-for-service basis as a model for any total-coverage program?

— Should society be asked to pay for the damage done by adults' life-style choices and/or neglect? Or should a system of rewards and penalties be applied?

3. **Equitable distribution of services:**

— The difference between rural and urban availability of dental services is obvious, pronounced and frequently cited already to this commission.

— Geography is a factor even when cost is not (public health hygienists note improvement in rural children's status the closer they are to an urban centre).

— Problems of access include long waits for appointments.

— The high cost of dentistry makes good dental care an upper-income privilege.

— A social awareness problem is evident in several dimensions:
  a) lack of awareness of need for and principles of good preventive hygiene
  b) lack of awareness of available sources of advice, instruction or specialized treatment
  c) wrong kind of awareness, thanks to toothpaste - add hyperbole; the idealized concept of the Perfect Mouth may lead to unnecessary cosmetic interventions

— There is a serious lack of attention to the special needs of the handicapped, seniors, people in hospitals or nursing homes.

Recommendation

1. WHEN would like to see a much greater emphasis on health education for prevention of dental problems, particulary the role of the prenatal nutrition and drug intake, the importance of breastfeeding, and the value of proper nutrition at all ages.

To this end we support provision of childbirth-preparation classes at government expenses, extension of family allowances to the prenatal period with the provision that nutrition counselling and dietary improvement be mandatory, and expansion of public health nutrition and dental hygiene programs.

2. WHEN supports expanded roles for paraprofessionals in dental care. Dental hygienists and technicians could provide education and routine services at less cost. Dentists should not be allowed to regulate their function; we support efforts of a national working group to define standards and work toward self-regulation.

At the same time private fee scales and mechanisms for MSI coverage must be established so that these paraprofessionals can work independently or through community clinics.

3. WHEN supports the community clinic concept, where the combined talents of paraprofessionals and dentists could be used appropriately (along with other medical and social services) in facilities developed and controlled by the community. From this core mobile services could be directed to rural areas, homes for special care and other areas with unmet needs. Community involvement would help increase awareness and value placed on dental health.

4. WHEN requests careful examination of the publicly-funded children's dentistry program to answer these questions: Who is getting the benefit? Are there abuses? Should this be the model for extending coverage to all ages? Can society afford to extend coverage to universality without applying penalties for those who do not practice good personal habits?

We wish this committee well in your efforts to help provide answers to these concerns, and thank you for your attention.

CHAPTER 3

EDUCATION

One major key to efficient and sufficient dental services rests in the area of education.

The term "education" has many facets, each of which plays an important part in the creating of a total dental service. We have examined education in the following major contexts:

1. Education facilities
2. Education pre-requisites for admission
3. Education curriculum
4. Continuing education
5. Public education

Facilities

The committee has found wide variance in educational facilities and programs.

The Dalhousie Dental School educates future dentists & dental hygienists. The committee was very impressed by the facility, faculty and program. High standards stress professional ability and ethics to best serve the public. However, there is an immediate need to question the objective of increasing the number of dental graduates to 48 or more per year. It is doubtful if Atlantic Canada could absorb that number over an extended period. (see appendix 7).

The Nova Scotia Institute of Technology educates future Dental Assistants and Dental Technicians. This institution does a creditable job but does not have equal facilities or equipment when compared with the Dalhousie Dental School.

The Nova Scotia School of Denturism, located in the Dartmouth Regional Vocational School, lacks adequate facilities and programs. Unfortunately, this school lacks a sufficiently high standard of admission requirements, proper training facilities and medical library services. This is not a reflection upon the individuals involved. Rather it decries the lack of sufficient funding and support facilities.

The committee will recommend that these three training institutions be consolidated. The Dalhousie Dental School has the facilities & manpower to provide excellent training for future dentists, assistants, denturists, hygienists and technicians.

This does not suggest that the various disciplines be absorbed by the Dalhousie Dental School. Each discipline should maintain its separate identification and integrity. It should be possible to conduct separate, yet co-operative, degree and diploma courses within the Dalhousie University dental faculty. The general public would be better served if all five disciplines were trained together. They should then work together with co-operation, mutual understanding and respect in the future.

It is recognized that moving the Nova Scotia School of Denturism from Dartmouth Vocational School to Dalhousie University will create an added expense to prospective future students.

There is no tuition fee for education services at Dartmouth Vocational School. Such a fee is charged at Dalhousie University. It is recommended that tuition fees for denturist students be the same as for the dental hygiene course already in place. This is not an impossible problem to overcome.The students would be eligible for student loans. The committee sincerely believes that the superior education experience will more than balance the personal cost of tuition.

Admission Pre-Requisites

The problem of admission pre-requisites is certainly not insurmountable. The pre-requisites for admission to the Dalhousie Dental School and Dental Hygienist course are clearly delineated and therefore cause no concern for prospective applicants.

There is however, reason for concern re: pre-requisites for admission to the Nova Scotia School of Denturism. The Denturists Society suggests in its brief to the committee that the minimum entrance requirements should be a Nova Scotia High School Leaving Certificate which would include biology. The Dental Committee suggests the entrance requirements be a Nova Scotia High School Leaving Certificate including academic biology, Grade 10 and Grade 12, and Grade 11 chemistry. Suggested courses in accountancy, business math and office procedure would also be of benefit.

Curriculum

In most cases, curriculum demands appear to meet the needs of the various disciplines.

In the event that denturists be given the right to produce a claspretained partial denture, a conserted, organized education program must be created to train denturists. The right to produce a claspretained partial denture shall not be granted until the course and examination are successfully completed.

Continuing Education

All members of the oral health community must have a comprehensive program to maintain knowledge of latest methods, equipment and materials. One important method is through an organized continuing education program.

Using the excellent facilities and continuing education department of Dalhousie University, efforts should be made to expand course offerings to include all disciplines within the oral health field.

Either through peer pressure or by law, if necessary, practioners within the oral health field should be required to attend upgrading courses at least once every two years.

Public Education

The committee was both surprised and disturbed by the high percentage of people who did not know about the provincial dental plan for children born after January 1, 1967. (see appendix 6).

Through the use of the media, school health programs, or local public health services, the general population should be made aware of various programs available to the public. The most immediate areas include, in addition to the children's program, the cleft palate program, fluoridation of water for preventive dentistry, limited dental surgery along with some endodontics and periodontics.

At the same time, the public must also tell the government what amount of money it is willing to pay through taxation. It is all very well for the public to demand that the government provide services, but the public must also keep in mind that the major place government obtains funds is from taxation. The public must, therefore, be realistic as to what they are asking from government. In actual fact there is no such thing as a "free dental plan".

Another area of consideration by the public is preventive dentistry. The topic of fluoridation of public water supplies will be considered later in this report. Suffice to say now that the prevention of tooth decay is much easier and less expensive than the repair of decayed teeth. If the public wants government to provide dental care then it is also reasonable to expect the public to accept the responsibility of preventing tooth decay.

The public has a responsibility for its own oral health care through regular check-ups. There is a tendency for a large percentage to wait until an emergency arises, then complain about costs and difficulty in obtaining dental services. Preventive measures can generally help avoid large financial outlay.

A change in public attitudes should be a basic objective concerning dental services. Foremost should be the development of a positive lifestyle behavior pattern in the population that will prevent as much dental disease as possible. Any dental disease that does occur should be treated before

extraction of teeth becomes necessary. This should be a team effort between the Department of Health, the dental profession and the public themselves. This concept has to start with the young and keep expanding as time passes.

Certain basic programs should be stressed:

1. Pre-natal dental health.

2. Post-natal dental health - mother and child. Stress information re: Children's Dental Plan.

3. Pre-school screening program to include dental examination, with a written report to parents.

4. School dental health programs from primary to grade 6. Use of Public Health Nurses and Hygienists should be made stressing brushing, flossing skills, and good food habits. Most important is to create a contact between the hygienist and the parent thus having the correct behaviour established for all members of the family.

5. Increased use of the media to reach all sectors of the population.

Education Costs

It has been found that a wide variety of costs and averages are found in education for each discipline.

1. Dentist - Estimated cost for 1981-82 session to the Province, per dental student, was $23,000. Individual costs include $1,250.00 tuition plus $67.00 student union fees, and $50.00 society fees for a total of $1,367.00. (see appendix 4).

2. Dental Hygienist - Estimated cost to the government is approximately $17,000 per year. Individual fees amount to $1,172.50. (see appendix 4).

3. Dental Assistant - N.S.I.T. estimates a cost of $4,111.00 to the Province per student each year. Individual costs are $365.00.

4. Dental Technician - cost per student, per year, to the Province is estimated to be $3,330.00 - individual expenses amount to $165.00.

5. Denturists - The amount of money allocated for year 1981-82 was $68,400.00. With three denturists graduating this year, this averages out to be $22,800.00 per student. If the same amount is allocated for 1982-83, this average would drop to $11,400.00 per student (6 students). Students pay individual costs of $67.45.

It should be noted that individual costs are meant as in-school fees and do not include room, board or other personal costs.

Provincial Costs For Dental Programs

Children's Dental Plan

— The total cost of the children's dental plan for the fiscal year ending December 31, 1981 was $8,333.501.00. This total was distributed among 286 dentists.

Dental-Surgical

— Total cost of dental - surgical service for the fiscal year ending December 31, 1981 was $1,189.970.00.

Mentally Retarded

— Total cost of dental service for the mentally retarded in the fiscal year ending December 31, 1981 was $11,435.00.

Cleft Palate

— Total cost of cleft palate treatment to the province of Nova Scotia for the fiscal year ending December 31, 1981 was $155.945,00.

Total cost for the four programs: $9,690.851.00 for the fiscal year ending December 1981. (see appendix 5).

Concerning the sharing of costs, an arrangement has been established between the government of Nova Scotia and the other three Atlantic Provinces to aid the province in the funding of the Dalhousie Dental School.

For the school year 1980-81 the province of New Brunswick contributed 426,284 dollars, P.E.I. 156,104 dollars and Newfoundland 166,050 dollars for a total of 748,438 dollars.

New Brunswick and Prince Edward Island are billed on full recovery to cost through a weighted system, i.e., dental students are each assigned a weight of 12 (W = 4). The two provinces then compensate the Nova Scotia treasury at the rate of $1,501 per weight. Thus if New Brunswick had six dental students and four hygienists their total combined "weight" would equal 86. Multiply this by $1,501 and the total New Brunswick contribution would be 129,086 dollars. A few other factors come into play concerning the final recommendation but this is the basic formula.

The Newfoundland arrangement is not as structured but for the purposes of the Committee the Newfoundland contribution comes to approximately 11.055 dollars per student for the 1980-81 school year.

CHAPTER IV

DENTISTS

Dentistry is that branch of the healing arts concerned with the teeth, oral cavity and associated structures. This includes prevention, diagnosis and treatment of disease and restoration of defective or missing tissue.

Although it is difficult to get an accurate estimate of the number of citizens of the province of Nova Scotia that seek the services of the practising dentist, it is estimated that no more than 40% of the population seek the services of this profession on a regular basis.

Practising dentists throughout the province have been providing very valuable service to the people for many years. They continue to provide service to a greater number of citizens as more of the public recognize the importance of maintaining a healthy mouth.

Unfortunately, too great a number of our citizens place oral health very low on their list of priorities because of the cost involved in visiting the dentist. In examining a patient's teeth at regular intervals, the dentist may find and treat a disease before it becomes serious. Consequently, dental costs can be kept to a minimum through preventive dentistry.

This dental profession is divided into a number of specialized fields.

- Orthodontist
- Periodontist
- Endodontist
- Prosthodontist
- Paedodontist
- Gerodontist
- Oral Surgeon

The dentists in the province of Nova Scotia are members of the Nova Scotia Dental Association. The Nova Scotia Dental Association carries out many important functions i.e. preventive dentistry campaigns, peer review, legislation and other matters representing the profession. On the other hand, the Nova Scotia Dental Board, by virtue of legislation, has been given the responsibility to see that people in the profession have the education and appropriate license to practice. Further, the Nova Scotia Dental Board has the responsibility to see that appropriate standards of practice are maintained by all professions and auxiliaries associated in oral health.

Students who enter into the field of dentistry have completed a course of study in a post-secondary facility. Usually they possess a degree in science and have graduated in the top one third of the class before meeting the entrance requirements of the Faculty of Dentistry. They have sufficient education to enable them to comprehend the subjects in the curriculum. These people take a minimum of four years to get their degree in dentistry. Many return to university to continue their education and take a masters degree in one or more of the many specialties in dentistry.

The dental profession must be considered the leader in the field of oral health. As a result, this profession must be given the respect and consideration earned through education, and public service.

The three major areas that must be of concern not only to the profession, but also by the government and people of Nova Scotia are PREVENTION, EDUCATION, & TREATMENT. We cannot expect the people of our province to have good teeth unless we have the proper program of prevention of caries in place.

Proper appreciation of oral health cannot be attained without proper education in oral health. All of these must be followed by proper treatment.

Dental Specialists

The dental profession is divided into a number of specialties as identified under the heading, **dentists.**

Dental specialists are dentists who have taken post-graduate studies in a particular discipline of dentistry.

The vast majority of dental specialists are located in the Halifax area. This is due to the availability of hospital facilities required by many specialists, combined with the opportunity to teach at the Dalhousie Faculty of Dentistry. It is often necessary to consult, for treatment planning, with other specialists.

As the number of dental specialists increases, it is the opinion of the Dental Services Review Committee that the mal-distribution of specialists will remedy itself within the foreseeable future. This is based on the provision that hospital dental facilities are developed throughout the province. If these facilties are not included in the future hospital plans, the committee does not forecast any vast changes in specialty delivery available to the public other than in metro area.

The committee must take this opportunity to recognize the tremendous contribution the dental specialists have made to victims who have suffered from accident, sickness or birth defect.

The main obstacle pertaining to dental surgical care is the high fees charged by the specialists. However, we must consider the amount of public expenditures required for the construction and unkeep of dental facilities in public hospitals, and the high cost in terms of time and money spent by the dentist to get the training.

Orthodontistry, on the other hand, is usually available to the public through use of operatories located at the practitioner's place of business/ practice.

The maxial facial specialty is one area of dental specialty which is relatively new for this area. Fortunately we do have a specialist in this area teaching at the Faculty of Dentistry at Dalhousie University and producing appliances for patients who have had major surgery to remove a malignant growth. This assistance in the area of cosmetic appliances gives the patients the will to survive in the never ending fight against the disease. Hopefully we can attract additional prosthodontists to practice in our province. Of concern to this committee is the fact that this treatment is not provided by the MSI program. It will be the recommendation of this committee that services and appliances be paid by the MSI program.

Gerodontics is that part of dentistry concerned with restoration of parts of the teeth that are defective as a result of disease, trauma or abnormal development to a state of normal function, health and esthetics. This specifically involves older people and the committee believes that we have an acute shortage of people in this dental specialty.

The committee would encourage dentists to enter a specialty only after first determining that the need is there. It appears, from our review, that we do not have an oversupply of dental specialists practising in the province.

CHAPTER V

DENTAL HYGIENISTS

The School of Dental Hygiene was established as a part of the Dalhousie University Faculty of Dentistry in 1961. The course, two years in length, leads to a diploma in dental hygiene.

The dental hygienist has become more accepted, over the years, by both the dentist and the public. Indeed, demand for the services of a dental hygienist is such that demand exceeds supply.

The dental hygienist, upon receiving her diploma can enter one of the two fields of service:

1. employment in a dentist's office
2. employment by the Department of Health

Many practising dentists include a hygienist as part of the dental team. A large percentage of hygienists show a preference towards working in a metro area. This creates a constant competition for the hygienists' services between a metro practice, a rural dental practice and the Department of Health.

Since both are educated at the same facility, dentists and hygienists appear to understand each other's role and have developed professional respect and rapport.

Working through the Department of Health, the dental hygienist attempts to investigate, educate and correlate services in the more rural areas. This is generally done through the schools in conjunction with the children's dental program. Many dentists and public health officials claim that this is the area where the dental hygienist can make the greatest contribution. There is no doubt that hygienists are even more necessary where regular dental services are limited or non existent.

It is imperative that rural school visitations be increased so that all areas are visited yearly. The committee feels that the school education program will, in time, be the most successful way to increase the percentage of population using dental services.

Hygienists form an integral part of the oral health team and supervision by the dentist in dental clinics should remain. In rural areas the hygienists should continue to exercise functions under supervision of the Department of Public Health.

The Dental Services Review Committee will recommend that all practising hygienists be licensed and be a member of the Nova Scotia Hygienists Association. Membership in the Canadian Hygienist Association should be done by choice of the individual.

CHAPTER VI

DENTAL ASSISTANTS

The modern dental assistant has gradually developed into an instrumental, if not essential auxiliary in the delivery of comprehensive dental health care to Nova Scotia. At one time trained on the job exclusively by the practising dentist, assistants have been formally instructed since the fall of 1968 at the Nova Scotia Institute of Technology on Leeds Street in Halifax.

The Dental Assistant program is described in the NSIT calendar as one which is designed to "provide the necessary manual skills, technical knowledge, and clinical experience which will enable the prospective dental assistant to be an indispensable asset to the dental profession". The duties of the dental assistant are varied and can encompass such diverse activities as chairside assisting to bookeeping and office management. They are usually responsible for the many practical things which have to be dealt with in a busy dental practice such as x-ray processing, lab procedures, sterilization and overall care of the office equipment, business correspondence and management of patients being treated on the premises.

The late 1970's up to the present have witnessed an increased emphasis on the concept of "four handed" dentistry. This concept, which has rapidly gained wide acceptance in the dental community, has the assistant working with the dentist as a team in the treatment of in-chair patients. This has resulted in expanded duties for the practising assistant, some of which are:

1. Patient education and motivation.
2. Application of anticariogenic agents.
3. Exposing and processing of dental radiograms.
4. Application of rubber dam.
5. Preliminary impressions for study models.
6. Irrigation and drying of root canals and placement of dressings.

The present program at NSIT is a one year course with a maximum of 36 graduates per year. All graduates must apply to the Provincial Dental Board for certification as a Registered Dental Assistant in the province of Nova Scotia. This permits the performance of the intra-oral duties that have been taught as permitted by law. Only a registered dental assistant (R.D.A.) can perform these duties.

The concept of four-handed dentistry is encouraged through a program in which dental assistant students spend 50% of their time after Christmas break working with third and fourth year dental students at the Dalhousie Dental Clinic. They also assist experienced dentists providing patient treatment at the Nova Scotia Institute of Technology clinic.

The emphasis of the viability of "four handed" dentistry augers well for the future of dental assistants. The increasing complexity and size of the modern dental office has resulted in an extremely high demand for their services. As well, the traditional pattern of graduating dental assistants finding employment primarily in the metropolitan area of Halifax-Dartmouth is slowly being altered as more graduates are beginning to find employment in the smaller population centres of the province.

The dental assistants of Nova Scotia have their own association under the auspicious of the Nova Scotia Dental Association and are licensed by the Provincial Dental Board. They do not have an act governing them as an independent association.

The present situation appears to dictate that an incorporation of the dental assistants of Nova Scotia is eventually necessary. Although an argument can be made for "practising" dental assistants in the province to be registered with the Dental Association, we believe that an independent Dental Assistant society should be formed.

The program at NSIT provides a good background for the aspiring dental assistant. A year or more of on the job training is instrumental in the grooming of an efficient, dependable auxiliary in today's dental office. The previously mentioned practice of "four-handed" dentistry highlights the importance of dental and assistant students learning their trade together as much as possible. This would indicate that the present system of separate learning institutions for these disciplines is quickly becoming redundant and should be readdressed immediately.

CHAPTER VII

DENTURISTS

The denturist became a legal part of oral health services for Nova Scotia in 1973. This does not mean that denturists have achieved universal acceptance and support by the rest of the oral health community. As a result, the Denturist Society has spent the past decade seeking improvements to the provincial legislation of 1973.

The major areas of concern have been:

1. Total control of the Denturist Society.
2. Improvement of education facilities and curriculum.
3. The right to produce claspretained dentures.
4. The right (or responsibility) to discipline all denturists by the Denturist Society.
5. A Registrar for the denturist profession who will be actively involved in registration, routine inspection of clinics along with other assigned duties as necessary.
6. Recognition of the need for all licensed denturists to be members of the Denturist Society, including the collection of yearly dues.

It is the opinion of the Dental Services Review Committee that professional recognition and acceptance of denturism cannot be legislated. Universal respect and recognition can only be earned. The Denturist Society has recognized this, and has made positive efforts to upgrade denturism.

The key component in these efforts is education. In its 1982 "Brief to the Dental Services Review Committee", the Denturist Society of Nova Scotia placed great emphasis on the need for continual improvement and review of education facilities and continuing education programs. To quote from their brief, speaking of education, "it must provide the environment that will permit a gradual broadening of educational standards so it can be said that educational qualifications for denturists not only equal that of the dental profession but surpasses their qualifications in our phase of dentistry". To achieve this goal, the committee feels that emphasis must be placed on:

1. Higher standard of entrance requirements to the School of Denturism.
2. Improvement of education facilities.
3. Upgrading of curriculum and faculty, by moving the school to Dalhousie University.
4. Creation of an up-to-date library facility.
5. Creation of a continuing education program on a regular basis.

Using education as a starting point, denturism can begin to create a climate necessary for the achievement of its goals.

The denturists ask for control of their own professional organizations. At present, the denturists are outnumbered five to two on their own Licensing Board. It is their feeling that dentists should not serve on the Licensing Board, but they do not object to some participation by lay people.

With respect to permission to produce claspretained partials, the committee does not agree with the following statement:

> "The demand for low-cost partial dentures by a segment of the population will be met legally or illegally with or without regulations".

This is part of a total paragraph from the Denturist Society Brief, found on page 9.3.

> "Denturists are now part of the dental care delivery system of Nova Scotia We. do not desire to usurp or supplant the dentist's pre-eminent position. However, the Denturist Society believes that denturists have the skill and knowledge to provide a level of service to the public which goes beyond what is now permissible under the Act. The public in many cases, is being denied access to this service. We wish to bring people in the province who are out of the dental flow back into the mainstream of denture care. There are many people who are partially edentulous who cannot afford partial dentures under the present system of delivery. As a result, the condition of their mouths continues to deteriorate because they do not have access to what could be a low-cost service. There must be a method of providing partial dentures to such people at a reasonable cost.
>
> The demand for low-cost partial dentures by a segment of the population will be met legally or illegally with or without regulations".

Indeed, should the right to produce claspretained partials be granted, several conditions must be met:

1. The curriculum and facility must be upgraded to meet the knowledge requirements to safely produce claspretained partials. The committee will recommend that the Denture School be relocated to Dalhousie University (see recommendation #2).

2. Licensed denturists, already practising, must be required to spend sufficient time to upgrade their knowledge and skills before being certified to produce claspretained partials.
3. Student denturists shall be required to spend a period of study sufficient to learn the production of complete dentures and claspretained dentures.

From discussions with both the Dental Society and Denturist Society, the committee has been told that present enforcement of the Denturist Act has proven to be impossible. The denturists do not feel it should be the responsibility of the Dental Society to enforce the Denturist Act. In addition, the Dental Society is of the opinion that it should not be expected to enforce the Denturist Act. The province of Nova Scotia has also not undertaken prosecution. This does not mean that violations are not taking place.

The Denturist Society, in its Brief to this committee, states:

> "The present Denturist Act must be amended to give the denturists the ability to administer their own society and profession". (pg. 4.2).

The Dental Services Review Committee is prepared to support the denturists' recommendation that all licensed denturists should have compulsory membership to the Denturist Society. It stands to reasons that one must act like a professional if he wishes to be seen by the public as being a professional. We further agree that the Denturist Society should have the responsibility to enforce the Denturist Act. This can best be accomplished through compulsory membership to the Denturist Society for all licensed denturists.

CHAPTER VIII

DENTAL TECHNICIANS

The 1972 task force on dental care defined dental technicians as "craftsman oriented auxilaries who work predominantly in laboratories removed from the dental office and who fabricate prostheses for dentists from specific instructions or prescriptions".

The present role of the technician has not altered dramatically from the above description over the past decade. Dental technicians work primarily out of a commercial laboratory, removed from the actual first hand delivery of dental care. They still suffer from a lack of recognition for their services and skills.

There are at present thirty registered technicians with the Nova Scotia Dental Technicians Association. (There are approximately sixty members in the association, but half are not licensed R.D.T.'s since they usually are students or lab workers who are a couple of requirements short of a full license). Technicians suffer from the lack of compulsory registration for people involved in the making of dental appliances. Commercial laboratories should be required to employ only trained personnel.

The Nova Scotia Institute of Technology on Leeds Street, Halifax is the provincial training centre for dental technicians under the direction of Dr. Robert Wilson. The annual graduating class is usually from ten to twelve students.

The training of highly skilled technicians is instrumental in the delivery of comprehensive dental care to Nova Scotians. Wayne Banfield, technical instructor at the Dalhousie Dental School has broken down the instruction of dental technicians into five categories:

1. Ceramics
2. Cast partials
3. Crown and bridge (i.e. goldwork, etc.)
4. Orthodontics
5. Complete dentures

There is also a sixth category still in the formative stages dealing with the construction of maxial-facial appliances.

The technicians have exhibited concern over the double standards that exist in the dental field. For example, most dentists do not have the depth of knowledge necessary in the making of highly technical and extremely fine appliances. Yet this important aspect of dental delivery provided by a well trained technician is continually disregarded by the dental profession.

These attitudes are perhaps the result of scars left on the profession from the early days of the 1970's when the denturist movement, most of whom were technicians, broke out of the classical dental set-up to establish their new trade or profession. Such long memories are perhaps unfortunate since today's technician does not want to break away from the existing system. If anything, the technical profession wants the dental profession to work more closely with them in the delivery of first rate appliances to the public they are trained to serve.

However, all "technicians" do not receive the same level of training. There are many working in commercial laboratories at present who are proficient in some, but not necessarily all the aspects of dental technology. In addition, the assembly line approach of most of the dental labs eventually leads to erosion of certain acquired skills. This approach by the commercial lab owners and its stifling effect on the profession is further aggravated by the common practice of hiring untrained, unskilled personnel at a cheap wage to perform single, simple duties in the manufacture of a dental appliance. This approach has had a negative influence on the development of highly competent technicians, often resulting in many dentists sending work out of the province. It only stands to reason that a patient would be better served by a dentist and technician working as a team, that would be the case when an impression is sent to a lab in Montreal or Toronto and then returned for a fitting. Subsequently, it would seem incumbent upon the dental profession and the technicians to promote a new order in Nova Scotia to insure that the vast majority of laboratory work can be accompolished within existing facilities. The present system, unfortunately, can only be described as backward and out of step with the overall improved system of dental health care in Nova Scotia. This frequent practice of dentists to send work out to out-of-province laboratories certainly runs contrary to the expenditure of government money for the training of technicians at NSIT.

The first step in correcting this undesirable situation is to allow for more direct contact between the technical and dental students. Although this is already done on a limited scale, our experience with the hygienists and dentists clearly illustrates that the ideal circumstance is one where interdependent professions are trained under the same roof. This scenerio, of course, hinges on the viability of incorporating all dental related auxiliaries within the Dalhousie Dental School, a concept explored separately in this report.

It has been suggested that three full-time dentists could provide ample work for one highly skilled technician. Under the present expansion plans of the Dalhousie Dental program, this would require between fourteen and sixteen technical graduates per year. Certainly the Dalhousie Dental School could accomodate a technical class of this size. The resultant well-roundedness of a technician graduating from Dalhousie would result in a decline of "bootlegging" and low quality work as a highly trained technician should be readily employable by a dental practice.

We have mentioned the situation concerning commercial laboratories. A positive step in the improvement of these labs would be establishment of sanitation and ventilation standards. Such a move would greatly aid the improvement of the technician's image in the eyes of the dental profession.

Another appropriate step might be the establishment of a program under the joint co-operation of the commercial lab owners and the professional training facilties. Although the graduating technician will usually end up working in a commercial lab, they have no official contact with the commercial labs during their training period. At present, their only contact outside of NSIT is the all too infrequent sojourn to the facilities of the Dalhousie Dental School. When the incorporation of dental technicians into the Dalhousie Dental School does become a reality, some experience at a commercial lab prior to graduation would still be advisable.

The technician is often the "forgotten one" or "odd man out" in the delivery of dental health care. The termination of such an oversight is not only long overdue but essential if all the dental auxilaries are to work with the dental profession in a meaningful manner.

Comprehensive dental health care will never be realized unless confidence can truly be expressed in the auxiliary professions to do their duties competently. The inception of these proposed changes to the present status of technicians could go a long way to making such goals realities.

CHAPTER IX

INVENTORY OF DENTAL MANPOWER

The three areas in the province which we feel are in the greatest need of additional dental services are as follows:

1) South Shore (Shelburne County)
2) Eastern Shore
3) Cape Breton (Rural areas)

Maldistribution

These areas have expressed a great concern over the lack of oral health services and have made every effort to attract professional personnel. Rural areas indicate that they will support dentists without involving large provincial grants. Any dentist going to rural areas must be prepared to do some public relations work — perhaps concentrating on schools first.

The children's program as it now exists enables a new dentist to earn a basic salary while promoting and servicing the adult population in the general area.

A RURAL AREA PRESENTS A DEFINITE DILEMMA.

A new dentist must prove to any community that he is there to stay. Many residents are reluctant to switch from their present dentist, even if this involves travelling long distances at considerable expense and inconvenience. Patients fear the risk of losing their present dentist if they are not sure the new arrival is prepared to stay in the community for more than two or three years. Dentists must have patients in order to survive. The community must accept and support him immediately, otherwise they will lose this very essential service. Failure of the dental practice will discourage future dentists from considering their particular community.

We also realize young dentists today are trained to utilize an assistant, secretary, and hygienist. However, caution should be emphasized. In any new business one must monitor overhead closely so expenses stay within one's means. A practice built slowly stands a better chance to survive.

Fixed costs such as equipment and office must be closely monitored.

Need For Future Planning

In the past few years our educational system has been aimed toward certain sectors without fully investigating the consequences of over-production of trained professionals.

Teachers, doctors and lawyers have all reached the saturation level. This situation has led to unemployment, underutilization or working in an entirely different vocation.

The cost of educating more professionals than the market place can comfortably absorb is a waste of human and financial resources. First is the direct cost that can be calculated in dollars. The second is loss of potential by those who cannot find gainful employment in which he was trained.

Rules of the market place cannot always be applied to professionals. Artifical barriers are constructed in the form of limited advertisement which make it difficult to shop and compare prices.

We approach doctors and dentists as qualified professionals to give us their best patient care, not their cheapest rate. It would not be wise to seek a dentist who would half clean teeth or not properly fill a tooth because of a weekly special or half price sale.

Dentists require varying numbers of patients per week, depending on work required. Certainly, salary expectations seldom diminish. Should there be an oversupply of dentists, there is reason to fear that essential services would soon be supplemented by some cosmetic service to maintain a given income expectation.

Young people with a desire to become a dentist should not be discouraged. Increasing the number of students from 26 to 56 still imposes a limiting number if there are 75-100 applying for enrollment. We would much rather see 36 dentists graduate with positions to serve in than 56 without.

Rural Assistance

Rural areas of Nova Scotia, with sparce population, face serious problems in dental services. Low incomes, low dental motivation and remoteness combine to suppress satisfactory full-time dental services. These areas are considered, by dentists, to be uneconomical.

Dentists also prefer to have hospital facilities available, medical doctors for emergency care, and other colleagues for consultation. In addition, the rural life style must be attractive to the dentist and his family. Departure from certain social amenities cause family concern and additional expense to maintaining social contracts. A dentist considering opening a practice in a rural area hesitates to make a long term commitment until he can be quite certain of sufficient local citizen support.

A brief presented to the committee by Dr. Alexander E. MacLeod outlined a method to supply experienced dentists from the metro area, where there seems to be a surplus, to the rural communities where they are needed. A contractor could supply dental care on a regular, continual basis.

Dr. MacLeod's managment program would contract to the community and the provincial government to provide experienced dentists at a minimal subsidy. A team consisting of a dentist, hygienist, dental assistant, and receptionist could provide care, perhaps for two weeks each month, or whatever the area required.

This approach would introduce effective dental services to rural communities at a minimal cost to government. Dentists within this program may also wish to remain full-time in a community as the work load increases and subsidy could be eliminated.

It will also be recommended that hygienists working for the Department of Health in the metro area or where there are adequate dental facilities, be transferred to rural districts and service the elementary and junior high schools. Maximum effort to visit, educate, and, where possible, treat with fluoride, should be top priority.

Native Populations

The Dental Services Review Committee received concerned representation from native Indian groups. These people live in, and experience, atypical conditions. They reside in Nova Scotia but are under the jurisdiction of the Government of Canada.

It should be noted that dental care of native people is the responsibility of the federal government. In a perfect situation, the federal government would employ a dental services team to deliver complete dental treatment on native reserves. However, native people must depend upon dental services off the reservation.

The native representatives appearing before the committee note the following:

1. Native people have to wait from six months to a year for dental appointments.
2. Some dental services are available only in Halifax, thus adding transportation costs to dental costs.
3. Local dentists do not want to treat native people because of the lengthly forms that have to be filled out. These are lengthy procedures for emergency cases and for a regular appointment.
4. There is too long a time span between completion of forms and payment from the federal government.

There is no question these are real concerns. The committee sought responses and suggested answers to these problems.

Dentists have made the observation that it would be extremely rare for a native person to wait six months for an appointment. Emergencies are treated on the basis of service within the day.

Specialists services are expensive and travel costs do add to the problem. However, this is a common concern to all Nova Scotians living outside a metro area.

When dealing with government agencies, forms seem inevitable. However, the time delay for payment should not exceed sixty days.

Federal and provincial officials must become more aware of the inter-related problems of dental services to native peoples, payment for services rendered and the need for greater co-operation between these levels of government.

Geriatric Dental Care In Nursing Homes

If asked, most directors of nursing homes in extended care facilities would say that each resident in the facility has a written individual plan of care developed by the nursing staff in accordance with the orders of the resident's physician. This plan would include all aspects of care such as personal hygiene, medication, administration, diet therapy, rehabilitative therapy and psychosocial needs. Quite likely, oral and dental care needs will be missing.

Is dentistry excluded from comprehensive care because physicians, nurses and the public do not consider dentistry an essential part of health services? Is it that the old myth is still alive that old people are "toothless" or wearing dentures and thus do not need dental care?

Dental neglect of the elderly has been related to ignorance of dental conditions and fear of treatment. Not only is the elderly person unaware that he or she can be treated, but other health professionals, especially physicians, often do not recommend dental care. Health care of the elderly is usually coordinated by a physician. Since dentistry falls outside of this sphere of direct influence and control, the dentist often has not been part of the coordinated effort to maintain the total health of the elderly.

Nursing homes are busy places. Most of the day-to-day care is carried out by nurses aides, many of whom do not have a personal high priority towards dental carea. Thus, oral health care for their patients is not a high priority. All too often, dental care will only be sought by the patient or the staff if there are complaints of severe discomfort or pain.

It should be noted that, particularly in the case of the aged, a simple oral complaint may not have a simple solution. It may be the manifistation of a greater systematic problem that requires the dentist to work with the physician in caring for the patient.

The problem of geriatric dental care goes beyond the patient. A number of studies have shown that dentists and dental students have negative attitudes towards aged persons. Unfortunately, they also show little interest in working with the older people.

The dental problems encountered in long-term care facilities by a dental team can be summarized as problems related to:

1. oral hygiene
2. caries and the restoration of teeth
3. periodontal disease
4. denture related problems
5. oral manifestations of systematic disease and drug induced dental diseases
6. oral cancer

A dental team must take into account the patient's life span, medical history, drug history, mental status, mobility status, neuromuscular coordination, dental status, previous dental experience, dental expectations and economic status.

In addition, the dental team must assess its own skills, the facilities in which it is working and the availability of equipment to carry out the dental procedures that may be required.

Senior citizens, usually living on a fixed income, face special problems. Quite often they are unable to cope or adjust with present day events. Government agencies must work closely with private agencies to protect the health and well being of an ever increasing percentage of society. It is important to prepare plans and policies today for the growth reality of the year 2,000.

CHAPTER X

CLEFT PALATE PROGRAM

Mrs. Claudia Giles, secretary to the Cleft Palate Program at the Izaac Walton Killam Hospital has outlined the cleft palate team for the committee. Besides herself, the in-hospital team consists of Dr. Downey Grover, the Chairman and director of the clinic, Dr. Gwen Terriss, Dr. St. John Brown, a radiologist, and Cynthia Tompkins, an audiologist. Another member of the team is Dr. Wayne Barro, an orthodontist who works out of the Dalhousie Dental Clinic.

Other members of the team who do not work on staff in the hospital area are: four plastic surgeons, Drs. Gaines and Parkhills who operate a joint practice, Dr. T.M.F. Roberts and Dr. James Ross; a special pathologist, Mrs. Vicki Roda; and an ear-throat specialist, Dr. M.N. Wali.

Concerning the number of cleft palate patients most recent registration on active file (until March 31, 1982) stands at 93. This would bring the total number of registrations since the inception of the program to 505. (see appendix 1).

Mrs. Giles did mention that public knowledge of the cleft palate program is limited and that hospitals and doctors have been lax in the past in informing the clinic of newborn patients. Cleft palate babies often go unregistered until they show up for treatment 14 to 18 months after they are born. Most cleft lip patients are treated after three months.

The Cleft Palate Clinic has produced a **Handbook for Parents** which emphasizes the importance of early diagnoses and treatment. Several significant quotes from this handbook would include:

1. "A complete program has been set up by the Cleft Palate Clinic and is designed to follow your baby from birth to adulthood. Since each child presents a different problem, we treat each one on an individual basis". (pg. 4).

   Committee Note: The key phrase here is "from birth to adulthood". Treatment cannot be cut off at a certain date, applicable to all patients.

2. "A baby's deciduous teeth are formed in the bone before he is born. Even some of the permanent teeth may begin forming at birth. Between 6 and 9 months of age the lower front teeth will begin to appear. Teeth grow and erupt in an orderly pattern which we hope to help you maintain. These deciduous teeth (or "primary or "baby" teeth as they are sometimes called) are MOST important:

i) in maintaining space for the permanent teeth - this is of extreme importance during the entire life of the "baby" teeth.
ii) in order to chew food properly, and
iii) in aiding proper speech development.

Care of baby teeth is as essential as is the care of the permanent teeth, which began to appear at about 6 years of age. DO NOT HAVE ANY OF YOUR CHILD'S TEETH REMOVED without consulting with the paedodonist at the Clinic, or the orthodontist. The unscheduled premature removal of baby teeth can cause major problems if not properly supervised".

3. "The eruption of permanent teeth occurs from about age 6 to 13 years (except for the wisdom teeth), and one or two teeth may appear in the cleft area of the palate.

These should not be removed without consultation with the paedodontist attached to the Cleft Palate Clinic, or the orthodontist, as such a tooth may be very valuable in acting as an anchor for braces to straighten the child's other teeth or this "stray" tooth may be moved into its proper relationship, the orthodontist may decide to correct this. Such treatment usually covers a period of 12 to 36 months, and requires checking and adjustment at frequent intervals.

Regular dental care is extremely important at this age, as you can see. It should be provided either by the dentists at the I.W.K. Hospital, or by your own dentist, in consultation with the paedodontist of the Cleft Palate Clinic, or the orthodontist, so that no teeth are lost, or removed needlessly".

CHAPTER XI

RECOMMENDATIONS

RECOMMENDATION I

Oral Health Services Board

It is recommended by the committee that the Department of Health immediately establish an Oral Health Services Board. The basic objectives of the Board would be to oversee, co-ordinate and review all dental services found within the province.

The Oral Health Services Board will replace all existing government boards and/or committees. This board will have all powers now existing transferred to its area of responsibility.

It is anticipated that any existing professional committees of the previous boards will continue to operate, function and meet for a transitional period. This will permit time for restructuring and an organized transfer of responsibility to the new board.

It is recognized that each discipline within oral health should have a large degree of autonomy. It would not be the purpose of an Oral Health Services Board to interfere with the ordinary routine operations within a discipline. The independent society of each discipline would continue to function.

The composition of the Board would be as outlined:

Oral Health Services Board

Chairman (lay person)
2 lay people
1 legal advisor (non-voting)
1 registrar (non-voting)
1 representative of the Dalhousie Dental School Faculty
2 representatives of the Dental Society
1 representative of the Denturist Society
1 representative from Dental Technicians

Representation of the Dental Hygienists and Dental Assistants will be included should they eventually form a legally recognized society.

The three lay people (including Chairman) shall be appointed by the Minister of Health. Initially the chairman will be appointed for three years, one lay perosn for one year and one lay person for two years. As positions become vacant, all subsequent appointments will be made for three years. Eventually, this will ensure that experienced people will always be on the Board. Members may be eligible for one reappointment only. The legal advisor is to be appointed by the Minister of Health.

A common Registrar shall be appointed by the Board. Should the Board be unable to agree upon a Registrar, the Minister of Health shall make the appointment. The Registrar shall report to the Board, through the chairman.

The Board must meet at least once a month. Between meetings, an active executive including the Chairman and Registrar shall be responsible for daily function and duties as directed by the Board. All meetings shall be called by the Chairman or by a majority of the Board.

There shall be manditory membership of all licensed people in each oral health discipline. Thus, for example, a practising dentist must belong to the Nova Scotia Dental Society or a practising denturist must belong to the Nova Scotia Denturist Society.

While it is expected that the routine matters remain the responsibility of a given Society, the Oral Health Services Board shall:

a) serve as a court of appeal
b) review existing or future legislation within oral health services
c) assist in co-ordinated efforts in public relations and information
d) co-ordinate and review licensing procedures in co-operation with the various societies, provincial law and the Registrar
e) co-ordinate continuous education programs
f) evaluate present and future manpower and facility needs for each facet of the oral health services
g) assess in-place government programs with the responsibility to recommend the maintenance, alteration, or discontinuation of these programs
h) ultimately enforce various acts relating to oral health

While reviewing past reports and submissions, the committee reviewed a copy of the **1976 Report of the Committee on Health Professional Licensing** chaired by Dr. C.B. Stewart (Dean Emeritus, Dalhousie Faculty of Medicine). This report was sent to Mr. A.B. Balcom, Chairman, Nova Scotia Council of Health, dated January 22, 1976. On page 55 of the report we read:

> "The committee suggests that the co-ordinating board in dental services should include dentists, specialists in the various fields of denistry such as orthodontics, periodontics, etc., dental hygienists, dental technicians, dental assistants and denturists. In determining which groups shall be placed under this co-ordinating board, the council will consult each organized group or discipline, but it will have final authority".
> (see appendix 8).

The creation of the Oral Health Services Board is an initial and primary recommendation. Through it, most other recommendations should be more effectively implemented.

There are a number of immediate problems to be corrected in the present legislation. These will be addressed through the legislative review that will be necessary to bring into force the Oral Health Services Board.

It is the committee's belief that it would be impractical to attempt to find short-range solutions to the present legislative problems. These matters will be simultaneously reviewed and corrected during the establishment of the Oral Health Services Board. This would be preferable to two reviews taking place concurrently. It is understood that the establishment of the Oral Health Services Board and its legislative process would supersede any other legislative review.

FACILITIES

RECOMMENDATION 2

The Dalhousie School of Dentistry should be the sole training facility for students wishing to be:

1. Dentists
2. Dental Assistants
3. Denturists
4. Dental Hygienists
5. Dental Technicians

OBSERVATIONS

Each discipline can be maintained as a separate entity, yet study in a co-operative atmosphere.

The facility at Dalhousie University is superior to those found at the Nova Scotia Institute of Technology and the School of Denturism located in the Dartmouth Vocational School.

This amalgamation of schools should prove to be more cost efficient, and will provide superior facilities and library services. In addition, through faculty co-operation, each discipline will develop a better appreciation of the total oral health package.

DENTISTS

RECOMMENDATION 3

No more than 36 dental students per year should be admitted to the Dalhousie Dental School. (see appendix 7).

OBSERVATIONS

The committee holds serious reservations concerning the policy of increasing the dental graduates to 48 per year.

Even if 35 (of the 48 graduates) per year remained in Nova Scotia the market would soon be saturated. More dentists does not automatically mean better service, less expensive or more readily available service.

This would not necessarily lower dental costs to the patient since overhead costs remain constant.

At present, about 40% of the population visit the dentist on a regular basis. Add a "floating" group of 10% who will go on an emergency demand basis. This means a maximum of 50% of our provincial population visit a dentist in any given year.

Using a provincial population base of 850,000 people, this means a maximum of 425,000 demanding services in a given year. Using the information from the Nova Scotia Dental Society that there are 273 actively practising dentists, this creates a dentist - patient ratio of one per 1,556 people.

Present day Dental Team concept including Dental Assistant, Hygienist and Secretary is considered to be able to effictively handle a patient/team ratio of 3,000 to 1. Should the public demand increase to 75% utilization, let alone 100%, then an increasing number of students could be admitted in future years.

RECOMMENDATION 4

The Faculty of Dentistry should broaden the Time Table to allow increased importance to Pediatric Denistry for student dentists.

OBSERVATIONS

It is the committee's view that this dental specialty becomes the foundation for a healthy population.

The dental profession can do a great deal for preventative dentistry by establishing a strong base with the child population.

The dentist/patient relationship will show a marked improvement by having the students trained to properly handle the young patient.

The general populations' lifetime attitude begins with early experience, either good or bad.

Attitudes, appreciation and knowledge created in childhood very often become a lifetime conception of the dental profession.

RECOMMENDATION 5

The Faculty of Dentistry should allocate more time in the Time Tables for clinical Geriatrics for students of dentistry.

OBSERVATIONS

It is not the intention of the Dental Services Review Committee to interfere with the curriculum of the Faculty of Dentistry. However, we have observed a very marked deficiency in the number of dentists who make their services available to the homes for special care.

By increasing the time required in the study of geriatrics, the students will become familiar with this dental specialty and consequently will become more inclined to do work in this area.

The problem will become more acute as the percentage of senior citizens increases. (see appendix 2, 2A, 2B).

MSI PROGRAM

RECOMMENDATION 6

Oral health services must be placed under the general MSI program. This should be done on a scaled payment basis.

a) birth up to age 18 - 100% government payment.
b) 18 to 64 - 100% individual.
c) 65 and up - 50% - 50% co-pay.

It is recognized that during the present (1982) financial restraint program this recommendation may have to become a long term goal. However the "long-term" does not mean indefinite. This still remains a top priority item.

OBSERVATION

The oral cavity is part of the human body. Therefore, oral health is part of the total body health.

Health costs cannot be a total government responsibility. The individual must accept some responsibility for his/her own physical well-being, especially during the earning years.

The most vulnerable, the young and the old, should receive the largest percentage of government concern and financial assistance.

RECOMMENDATION 7

The simple surgical procedures, which can safely be done in a dentist's office, should be paid for under the MSI program.

OBSERVATIONS

At present, any surgery done in a dentist's office is paid for by the patient. The identical operation done in a hospital is paid for under MSI.

Hospital facilities are more expensive to support than is a dentist's office.

Dentists often make use of hospital facilities in order to make their patient eligible for MSI benefits.

Any necessary surgery should be covered by MSI, regardless of the location of the service.

Decision as to location of the surgery is a professional responsibility of the dentist. Patient care and safety is, of course, top priority.

RECOMMENDATION 8

1. The cleft palate program should be continued with no cut-off age.
2. This program should be totally funded by MSI.

OBSERVATIONS

Any live birth, anywhere in the province of Nova Scotia, having any oral cavity deformity should be immediately reported to the cleft palate program of the Izaak Walton Killam hospital, Halifax.

Diagnosis and treatment should be a co-operative effort between local doctors and the cleft palate team of the Izaak Walton Killam hospital.

The Izaak Walton Killam permanent faculty should include the services of a full-time speech therapist.

No citizen of Nova Scotia should be expected to pay for, or live with unattended, this unfortunate accident of birth.

RECOMMENDATION 9

Maxial facial services and appliances should be made available, where necessary, with no cut-off age.

This program should be totally funded by MSI.

OBSERVATION

Whereas this service is generally necessary as the result of accident or the removal of a malignant growth, the treatment and appliance is necessary for the physical, mental and emotional well being of the patient.

EDUCATION

RECOMMENDATION 10

The province of Nova Scotia cannot afford to permit oral health services to fragment into various categories and/or sub-categories.

OBSERVATIONS

There must be well defined services and limitations, easily understood by the consuming public, for the public interest and protection.

High education standards for each discipline within the oral health structure must be established and maintained. At the same time, duplication of education services must be avoided, whenever possible, to keep costs to a minimum.

A comprehensive program of in-service training must be established and maintained in order to keep oral health services modern and efficient. The continuing education program found that the Dalhousie Dental School is a good example of a planned, up-to-date service offered to dentists of Atlantic Canada.

HOSPITALS

RECOMMENDATION 11

Any future plans for building of new or expansion of existing hospital facilities should include an adequate area for dental services.

OBSERVATIONS

The committee has found a great variance of attitude within the general medical field towards dental health services. Some hospitals schedule regular times for dental surgery, while others appear reluctant to establish regular program service.

Decision, as to policy on this matter, appears to be the result of local hospital policy.

Since the provincial government pays to help support hospital services, a minimum policy should be established to meet the needs of more serious dental problems requiring hospitalization.

DENTURISTS

RECOMMENDATION 12

It is recommended that the definition of denturism as suggested by the Denturists Society of Nova Scotia be conditionally accepted as follows:

> "Denturism is a means of providing a denture technology service direct to the public without the control or supervision of a dentist. Denture technology service means both complete dentures and partial dentures".
>
> **Committee Note:** "partial dentures" will be identified as being limited to claspretained dentures.

The committee strongly urges an immediate up-grading of the teaching facility and curriculum of the Nova Scotia School of Denturism.

It is recommended that the School of Denturism be removed from the Dartmouth Vocational School and be incorporated as a separate, independent diploma course of study using the facilities and faculty of the Dalhousie Dental School.

OBSERVATIONS

Entrance requirements be up-graded to include a grade 12 Nova Scotia High School Leaving Certificate or equivalant. Required courses will include academic grade 10 and grade 12 biology, and grade 11 chemistry. Also suggested will be a high school course in accounting, business math and office procedure.

The curriculum in the study of denturism should be such as to prepare a graduate for both complete and claspretained partial dentures.

Following formal training, an intern apprentice license shall be issued to the successful graduate. A period of one year apprenticeship with a licensed, practising denturist shall follow the formal training at the School of Denturism.

A permanent license shall be issued following the year of successful work as an apprentice dentist.

Denturists already holding a legal license shall have a period of study and examination before being permitted to produce claspretained partial dentures.

A continuing education program stressing updating denturism should be instituted. Denturists, to maintain their license, shall attend at least one continuing education course every two years.

Limitations must be placed upon the number of candidates accepted each year to the School of Denturism. The market can only absorb a limited number of denturists.

EDUCATION

RECOMMENDATION 13

Dental Assistants, Dental Technicians and Denturists shall be required to be in possession of a diploma from a recognized course of study before being permitted to practice their own chosen profession.

OBSERVATIONS

In the future, dental laboratories should not be permitted to employ non-trained individuals. This will require legislative intervention.

Basic knowledge and skills must be taught in recognized educational institutions.

PROFESSIONAL ASSOCIATION

RECOMMENDATION 14

All practising licensed hygienists be members of the Nova Scotia Hygienists Association.

OBSERVATIONS

Practising licensed hygienists should belong to their professional organization.

Hygienists are expected to give professional and monetary support for the preservation and improvement of their organization.

RECOMMENDATION 15

It is recommended that all practising licensed denturists in the province of Nova Scotia be required to become members of the Nova Scotia Denturists Society.

OBSERVATIONS

A practising licensed denturist should belong to his or her professional organization.

A practising, licensed denturist should give monetary support for the preservation and improvement of his or her profession.

The Denturist Society should be given the same legislative status as that presently afforded to the Dental Association of Nova Scotia. This would be done through legislative enactment.

PREVENTIVE MEASURES

RECOMMENDATION 16

Because of the long term financial and physiological advantages of fluoridation, the government of Nova Scotia should embark on a concentrated campaign to educate the general public on the benefits of a fluoridated water supply.

OBSERVATION

The government must put the onus on the public in the promotion of fluoridation. If the government is going to spend millions of dollars annually on the children's dental program and consider expanding into other areas and/or age groups, then the cost effectiveness of fluoridation cannot be continually ignored.

RECOMMENDATION 17

The province of Nova Scotia should immediately initiate an aggressive program to have all community water systems fluoridated.

OBSERVATIONS

As the province of Nova Scotia has embarked on a Children's Dental Program and as the costs associated with this program continue to esculate, it is prudent for the province to promote a fluoridation program with the resulting numbers of children having caries free permanent and deciduous teeth.

It is recommended that the ingestion of fluoride through drinking water be maintained at optinum concentration of fluoride at 1.2 mg/L or 1.2 parts per million.

It is regrettable that a large percentage of the Nova Scotia population should be denied this major caries prevention benefit.

Universal water fluoridation will have a positive impact on the oral health of the province. The ultimate goal is to have every individual's teeth last a lifetime. Fluoridation of community water supplies provide the best cost containment public health measure known for improving the dental health of the province's citizens. (see appendix 12).

Resources Guidelines for Canadian drinking water quality 1978.

a) Prepared by the Federal Provincial Working Group on drinking water of the Federal-Provincial Advisory Committee on Environmental and Occupational Health, published by authority of the Minister of National Health & Welfare.

b) Criteria Document in support of drinking water standards for fluoride, Canada 1979.

c) Accepted Dental Therapeutics, 38th edition, P 317, published by the American Dental Association.

RECOMMENDATION 18

The Dept. of Health should direct dental hygienists to visit rural schools and homes for special care on a regular (yearly) basis to inspect, educate, instruct, clean and apply fluoride when necessary.

OBSERVATIONS

Good dental health habits should begin early in life. Regular dental inspection by hygienists should create positive dental habits which could become a lifetime attitude.

RURAL SERVICES

RECOMMENDATION 19

The Department of Health should restrict its grants for dentist relocation to areas with exceptional problems in obtaining dental services.

OBSERVATIONS

The congestion of dentists in metro Halifax and other rural areas will correct itself as market forces come into play, i.e. dentists will see increasing advantages of establishing practices in the smaller towns of the province.

The increase of graduates from the Dalhousie Dental School will alleviate many of the problems of underserviced areas at the present attrition rate of 2% per year - a rate which has remained fairly constant over the past number of years.

The existence of the Children's Dental Program has enhanced the opportunity for a new dentist to establish a viable practice outside the metropolitan areas of the province. It provides a minimum level of guaranteed payment to the dentist for services rendered.

RECOMMENDATION 20

The Department of Health should give consideration to the "MacLeod Proposal" for solving the problem of shortage of dental services to rural areas.

OBSERVATIONS

The problem of obtaining adequate and consistent dental services for the more remote areas of the province is a serious concern to both the government and the people.

A.E. MacLeod D.D.S., a former faculty member of Dalhousie Dental School, has presented a contractual program whereas his dental management company would supply dentists one year at a time to work in rural areas.

The proposal of Dr. A.E. MacLeod, President, Scottish Enterprise Ltd., Halifax is as follows:

Problem

Residents of rural parts of Nova Scotia complain that dental care is difficult to obtain.

Factors

1) Professionals are reluctant to "start" a practice in a rural area if they are uncertain whether they, or their spouses, might later decide they really prefer living in a city.

2) The high cost of setting up a dental office makes a dentist reluctant to sign for a substantial bank loan as it is difficult to transfer the loan to somebody else who might want to practice in a rural area should he wish to move on.

3) The thin distribution of population in rural areas makes it difficult for a private dental office to be sustained in an economic manner.

4) Dental clinics, which already exist in various parts of Nova Scotia, are not being used.

Solution

Contract with a dental management company to supply dentists one year at a time to work in rural areas.

The contracts should be along the lines initiated and refined by the Medical Arts Dental Group in Halifax through the last five years.

The dentists and their staff should be managed along the dental management lines currently provided to the Medical Arts Dental Group and the to North End Community Health Association in Halifax.

APPENDIX 1

THE IZAAK WALTON KILLAM
HOSPITAL for CHILDREN
5850 UNIVERSITY AVENUE • P.O. BOX 3070 • HALIFAX, N.S. • B3J 3G9

1 April 1981

Mr. J.G. Hare,
Executive Director,
Health Services and
Insurance Commission,
P.O. Box 760
Halifax, N.S. B3J 2V2

Re: Dental Services for MSI—
Cleft Palate Dental Program

Dear Mr. Hare:

As you requested at our meeting in the Maritime Medical Care Board Room on 1 Oct. 79, we are submitting our report for the fiscal year ending 31 March 1981, covering operations in connection with the Program.

The number of patients orthodontically accessed and registered in the Program here and with Maritime Medical Care is **93,** during the past year.

Of these 93 patients

5 had moved to this province

12 were newborn

10 were 4-year-olds recalled for pre-school assessment

64 patients had not previously been seen at the Clinic, and of these, 17 had been previously unknown to us.

Total number of patients registered in the Program since evaluations began on 12 oct. 77 is **505.**

Yours very truly,

B.D. Grover, MD, FROP (C),
Chairman,
Cleft Palate Clinic

cc: Mr. S.P. Brannan
Mr. T. Hamson
Dr. W.B. Barro

APPENDIX 2

Estimate the number of Nova Scotians over age 65 by 1990.

Ray Antle of Statistics Canada provided the following information over the phone concerning the growth in population of "retired" in the province (Age 65+).

1978 - 84,400	1979 - 86,400	1980 - 88,200
1981 - 90,000	1982 - 91,500	1983 - 93,100
1984 - 94,700	1985 - 96,700	1986 - 98,400
1987 - 100,300	1988 - 101,600	1989 - 102,700

If we take the actual and projected population of Nova Scotia for the next decade or so for selected years, a pattern soon emerges.

1978 = 10.0%	N.S. population	843,000
1982 = 10.6%	"	866,000
1985 = 11.1%	"	872,000
1988 = 11.3%	"	898,300
1990 = 11.4%	"	908,400

The number of senior citizens will increase in real terms from 84,000 in 1978 to 103,800 in 1990, almost 20,000 in 12 years. They will go from constituting 10 per cent of the Nova Scotia population in 1978 to 11.4 per cent in 1990, throughout which time they were becoming a steady increasing percentage of residents in the province.

APPENDIX 2A

DEMOGRAPHICS OF THE ELDERLY IN NOVA SCOTIA

3:1 Nova Scotia Population by County and Percentage Change 1976-1981

Nova Scotia had an overall population increase of 2.3% over five (5) year period 1976 to 1981. (See Table 9) All counties experience population increases, with the exception of Annapolis, whose population decreased by 3.0%, Cumberland had a population decrease of 1.9%, Richmond a decrease by 1.3%, Cape Breton decreased by 0.9% and Guysborough whose population decreased by 0.6%.

TABLE 9

NOVA SCOTIA POPULATION BY COUNTY AND PERCENTAGE CHANGE 1976-1981

	1976 (Final)	1981 (Final)	% Change 1976-1981
Annapolis	23,208	22,522	-3.0
Cumberland	35,914	35,231	-1.9
Inverness	21,773	22,337	2.6
Richmond	12,447	12,284	-1.3
Antigonish	17,573	18,110	3.1
Digby	20,932	21,689	3.6
Kings	47,977	49,739	3.7
Shelburne	16,970	17,328	2.1
Cape Breton	128,229	127,035	-0.9
Guysborough	12,825	12,752	-0.6
Lunenburg	42,388	45,746	7.9
Victoria	8,417	8,432	0.2
Colchester	41,771	43,224	3.5
Halifax County	278,531	288,126	3.4
Pictou	49,076	50,350	2.6
Yarmouth	25,210	26,290	4.3
Hants	32,383	33,121	2.3
Queens	12,947	13,126	1.4
NOVA SCOTIA	828,571	847,422	2.3

Source: Statistics Canada

APPENDIX 2B

3:2 Percentage of Elderly Population for Nova Scotia and by County 1976 - 1981.

Nova Scotia's elderly increased from 80,730 in 1976 to 92,560 in 1981. The percentage of elderly increased from 9.7 in 1976 to 10.9 in 1981 or one percent more elderly per capita than the rest of Canada. All countries experienced elderly population increases over the same period.

TABLE 10
PERCENTAGE OF ELDERLY POPULATION
FOR NOVA SCOTIA AND BY COUNTY 1976-1981

	1976	%	1981	%
Annapolis	3,030	13.1	3,355	14.9
Cumberland	4,940	13.8	5,405	15.3
Inverness	2,200	10.1	2,565	11.5
Richmond	1,320	10.6	1,480	12.0
Antigonish	1,570	9.0	1,815	10.0
Digby	2,700	13.3	3,115	14.4
Kings	4,765	9.9	5,520	11.1
Shelburne	1,855	10.9	2.030	11.7
Cape Breton	11,515	9.0	13,720	10.8
Guysborough	1,700	13.3	1,800	14.1
Lunenburg	5,525	13.0	6,320	13.8
Victoria	1.075	12.8	1,155	13.7
Colchester	4,780	11.4	5,280	12.2
Halifax County	19,970	7.2	23,450	8.1
Pictou	5,635	11.5	6,345	12.6
Yarmouth	3,265	13.0	3,715	14.1
Hants	3,155	9.7	3,570	10.8
Queens	1,630	12.6	1,930	14.7
Nova Scotia	80,730	9.7	92,560	10.9
Canada	2,002,345	8.7	2,360,975	9.7

Source: Canada Statistics

APPENDIX 2C

3:3 Distribution of Elderly Population for Nova Scotia and by County - 1981.

Table 11 provides a distribution of the elderly male and female for Nova Scotia and by County. The over 70 age group represents 64.3 percent of the elderly population. Women make up 56.3 percent of the elderly population and men 43.7 percent. There are 11,570 more women than men.

TABLE 11

POPULATION DISTRIBUTION OF ELDERLY IN NOVA SCOTIA AND BY COUNTY – 1981

	AGE	MALE	FEMALE	TOTAL
Nova Scotia	All Ages	419,575	427,865	847,442
	65 - 69	15,550	17,505	33,055
	70 +	24,945	34,560	59,505
	65 +	40,495	52,065	92,560
Annapolis	All Ages	11,240	11,285	22,522
	65 - 69	535	600	1,135
	70 +	985	1,235	2,220
	65 +	1,520	1,835	3,355
Cumberland	All Ages	17,580	17,650	35,231
	65 - 69	890	1,010	1,900
	70 +	1,510	1,995	3,505
	65 +	2,400	3,005	5,405
Inverness	All Ages	11,325	11,010	22,317
	65 - 69	480	465	945
	70 +	780	840	1,620
	65 +	1,260	1,305	2,565
Richmond	All Ages	6,200	6,085	12,284
	65 - 69	285	230	515
	70 +	445	520	965
	65 +	730	750	1,480
Antigonish	All Ages	9,025	9,080	18,110
	65 - 69	310	360	670
	70 +	505	640	1,145
	65 +	815	1,000	1,815
Digby	All Ages	10,835	10,850	21,689
	65 - 69	555	515	1,070
	70 +	915	1,130	2,045
	65 +	1,470	1,645	3,115
Kings	All Ages	24,600	25,140	49,739
	65 - 69	915	990	1,905
	70 +	1,500	2,115	3,615
	65 +	2,415	3,105	5,520
Shelburne	All Ages	8,795	8,530	17,328
	65 - 69	350	350	700
	70 +	595	735	1,330
	65 +	945	1,085	2,030
Cape Breton	All Ages	62,570	64,465	127,035
	65 - 69	2,465	2,915	5,380
	70 +	3,400	4,940	8,340
	65 +	5,865	7,855	13,720
Guysborough	All Ages	6,470	6,280	12,757
	65 - 69	305	305	610
	70 +	555	635	1,190
	65 +	860	940	1,800
Lunenburg	All Ages	22,970	22,780	45,746
	65 - 69	1,065	1,130	2,195
	70 +	1,780	2,345	4,125
	65 +	2,845	3,475	6,320
Victoria	All Ages	4,290	4,140	8,431
	65 - 69	195	185	380
	70 +	360	415	775
	65 +	555	600	1,155
Colchester	All Ages	21,295	21,930	43,225
	65 - 69	830	915	1,745
	70 +	1,470	2,065	3,535
	65 +	2,300	2,980	5,280
Halifax County	All Ages	141,265	146,865	288,130
	65 - 69	3,815	4,725	8,540
	70 +	5,760	9,150	14,910
	65 +	9,575	13,875	23,450
Pictou	All Ages	25,055	25,310	50,365
	65 - 69	985	1,195	2,180
	70 +	1,760	2,395	4,155
	65 +	2,745	3,590	6,335
Yarmouth	All Ages	12,560	13,250	25,810
	65 - 69	625	675	1,300
	70 +	1,090	1,425	2,465
	65 +	1,715	2,000	3,715
Hants	All Ages	16,575	16,385	32,960
	65 - 69	565	615	1,180
	70 +	1,035	1,335	2,370
	65 +	1,600	1,950	3,550
Queens	All Ages	6,445	6,485	12,930
	65 - 69	280	330	610
	70 +	560	640	1,200
	65 +	840	970	1,810

Source: Statistics Canada

APPENDIX 3

Halifax Senior Citizens' Housing CORPORATION LIMITED

2015 Northwood Terrace, Halifax, Nova Scotia B3K 2S9 Tel. (902) 454-6211

February 4, 1982

Department of Public Health
P.O. Box 488, 8th floor
Joseph Howe Building
Halifax, Nova Scotia
B3J 2R8

Attention: THE HONOURABLE GERALD SHEEHY, MINISTER OF PUBLIC HEALTH

Dear Dr. Sheehy:

Re: "DENTAL CARE" IN HOMES FOR SPECIAL CARE

The importance of dental care for the aged is all too often overlooked or not sufficiently understood as evident by the lack of services across the province for older people; and it is, at best, inadequate.

Homes for Special Care across the province are interested in providing total care to their Residents which includes rational dental care and would provide what we feel would be an efficient way to provide geriatric preventive dental care and treatment to a large group of elderly people for evaluating the effectiveness of such a service, assuming the available resources were available by your department for:

(1) Advancing a proposal through the Department of Social Services for Preventive Dental Care in Homes for Special Care as an approved sharable cost item.

(2) Providing for dental hygienist to instruct "care givers" and Residents in Homes for Special Care in elementary oral hygiene, denture care and the like that, apart from contributing to preventing or eliminating infection caused by neglect, could also prevent the heavy financial costs associated with radical treatment.

To this end, please find enclosed a brief overview of Northwood's program and a paper on this topic, "Rational Dental Care In the Long Term Care Facility" by James D. Beck, Ph.D., Head of Preventive and Community Dentistry at the University of Iowa, College of Dentistry, and Ronald L. Ettinger, B.D.S., M.D.S., Professor with the Department of Removable Prosthodontics, also at the University of Iowa, College of Dentistry.

The oral health policy promoting rational dental care in long term care facilities is the same program available at Northwood which was reassuring and what prompts this letter.

We do hope that we can look forward in the not too distant future to some broad coherent program for the elderly, and that your department will give this request serious consideration.

In Service To Older People

HALIFAX SENIOR CITIZENS' HOUSING CORPORATION LIMITED

EDWARD L. ROACH, EXECUTIVE DIRECTOR

cc: The Honourable Edmund Morris, Minister, Department of Social Services
"Don" Pamenter, Executive Director, Nova Scotia Association, Homes for Special Care
H.R. Saulnier, President, Nova Scotia Association, Homes for Special Care
Jack Ingram Executive Director, Nova Scotia Association, Health Care Organizations

"OLD AGE HATH YET HIS HONOUR AND HIS TOIL"
ALFRED LORD TENNYSON — "ULYSSES"

APPENDIX 4

DALHOUSIE UNIVERSITY
HALIFAX, N.S.
B3H 4H8

OFFICE OF THE VICE-PRESIDENT
ADMINISTRATION AND FINANCE

November 26, 1981

Mr. J.D. Walker
Dental Services Review Committee
P.O. Box 575 Station M
Halifax, N.S.
B3J 2R7

Dear Mr. Walker:

In response to Mr. Baxter's request for statistics pertaining to Dental and Dental Hygiene students costs and tuition fees, the following is a summary based upon both published and unpublished financial statements where available and budgeted figures for the current fiscal year:

a.	**Cost per Student/year**	**- 78/79**	**79/80**	**80/81**	**81/82**
1.	DDS, OS, PGPP	- 18,731	20,904	20,000	23,000
2.	Dental Hygiene	- 13,424	15,012	16,000	17,000
b.	**Tuition (University Fee Only)**				
1.	DDS, OS, PGPP	- 960	990	1,035	1,250
2.	Dental Hygiene	- 840	840	915	1,100

You may see from the attached, that we adjusted the costs (by our best estimate) which were allocated to the DDS Program and should realistically be considered as an expense of Dental Hygiene Program for such things as general faculty, clinic and a small portion of the teaching support costs within the various departments other than Dental Hygiene. We do not pretend that these efforts were particularly sophisticated but we consider the bottom line to be a fairly reasonable estimate based upon the financial facts available which pertain to the faculty/department level. Currently Dr. Chester Stewart is conducting a study concerning faculty time expenditures on an individual basis which could shed further light upon the apportioning of costs between Dentistry and Dental Hygiene.

Yours very truly,

R. Robbie Shaw
Vice President
Administration & Finance

RS:ab
cc: Dean Bennett
Encl.

APPENDIX 5

DENTAL SERVICES PROGRAMS
Summary of Payments Made
1974 - 1982

TABLE I

Fiscal Year Ending March 31	Children's Dental Plan includes School for Blind	Dental-Surgical	Mentally Retarded July 23/76	Cleft Palate Apr. 1/77	TOTAL
1974	—	$ 327,117	—	—	$ 327,117
1975	$ 846,632 (1)	412,746	—	—	1,259,378
1976	2,080,499	544,350	—	—	2,624,849
1977	2,313,113	558,397	—	—	2,871,510
1978	2,983,263	670,641	784	12,743	3,667,431
1979	4,021,297	884,610	4,953	84,306	4,995,166
1980	5,128,747	1.027,322	7,394	111,560	6,275,023
1981	6,462,225	1.039,092	7,648	122,823	7,631,789
1982	8,333,501	1,189,970	11,435	155,945	9,960,851

(1) Partial Year: Plan implemented July 1, 1974

(2) Plan implemented July 23, 1976; no payments made during balance of year.

APPENDIX 6

MSI Children's Dental Plan
Table 2
Utilization Rates and Expenditure Per Beneficiary
April 1, 1981 to March 31, 1982

Age	Insured	Beneficiaries	Utilization Rate	Expenditure Per Beneficiary
Less Than 1	11,800	42	0.4	$ 20.95
1	12,200	299	2.5	31.22
2	12,300	1,621	13.2	39.72
3	12,300	5.259	42.8	51.85
4	12,100	6.981	57.7	66.46
5	12,700	8,121	63.9	71.86
6	12,900	8,671	67.2	79.08
7	12,800	8,948	69.9	92.24
8	13,500	9.501	70.4	94.46
9	13,800	9,474	68.7	90.55
10	14,600	9,842	67.4	85.81
11	14,400	9,495	65.9	82.29
12	13,900	9.029	65.0	85.16
13	14,000	8,724	62.3	88.06
14	11,000	5,261	47.8	93.24
15	600	140	23.3	127.37
TOTAL	194,900	101,408	52.0	$ 82.17
Ages 3 to 15	158,600	99,446	62.7	$ 83.04

1. Insured population in age groups 0-13 is the estimated population as of December, 1981. For age groups 14 and 15 the average number of insured persons during the year have been calculated. Date for the highest age group does not represent a full year's experience, however, as these children would have been 15 for only 1 to 3 months of the fiscal year. Population estimates were derived from Family Allowance Data.

APPENDIX 7

FINANCIAL POST
Special Report, September 25, 1982

DENTISTS

An increase in the number of dental schools in Canada in the past decade, and hence an increase in the number of dentists, has restricted the chances for establishing private practice.

John Gillies, executive director of the Ontario Dental Association, is still optimistic about the prospects for new dentists.

"I think anyone interested in entering the profession, or who is graduating now, can set up a successful practice, if he has the proper human-relation skills".

Nationally, there is no province in which there is a shortage of dentists.

The problem, Gillies says, is the need for dental services has to be translated into demand. That is, in the rural areas of most provinces, there may be a need for dental care. Since people are used to doing without it, dentists can find it difficult to establish practices. However, there is a particular need for specialists - oral surgeons, orthodontists, periodontists and endontists all are needed outside the major cities.

Gilles says the demand for service has been hurt by confusion, among dentists as well as would-be patients, over the effect of last November's federal budget proposals. As a result of the budget, premiums paid by employers for employee dental plans will be a taxable benefit.

However, many dentists and potential patients apparently believed the value of services provided would be taxed.

Dr. Donald Lewis, of the dentistry faculty, University of Toronto, last year completed a study of dental manpower requirements in Ontario. He suggests although the prospects for a career in dentistry are not as bright as they were five or ten years ago, those seeking practices outside urban areas can still expect to do well.

APPENDIX 8

REPORT OF THE COMMITTEE ON HEALTH PROFESSIONAL LISTING
January, 1976 (pages 54-55)

It is recommended that the Council on Health Personnel Standards establish at least five Coordinating Boards initially, in the following fields:

(a) Dental Services.
(b) Medical and Surgical Services.
(c) Nursing Services.
(d) Pharmacy Services.
(e) Health Administration Services.

It is recommended that the Council on Health Personnel Standards also have authority to establish additional Coordinating Boards to deal with standards for groups of professions or disciplines that cannot readily be categorized in one of the five groups listed above. However, the aim should be to keep the number of such Coordinating Boards as small as is practicable.

It is recommended that the Council determine which health disciplines shall be included under each Coordinating Board, or establish new groupings, when necessary. In rare circumstances, the Council itself may serve as the coordinating agency for professions or disiplines which are not closely related to any group, or which overlap several.

In some groups, or disciplines, such as medical and surgical treatment services, the number of disciplines may be too large and varied to be dealth with by one Coordinating Board directly, and in such instances Committees may be formed responsible to the Coordinating Board.

The establishment of such committees would be subject to approval by the Coordinating Board and the Council. Licensing Boards or their Committees will be responsible to the Coordinating Board of the specific group, and through it to the Council.

The Committee suggests that the Coordinating Board in Dental Services should include dentists, specialists in the various fields of dentistry such as orthodontics, periodontics, etc., dental hygienists, dental technicians, dental assistants and denturists. In determining which groups shall be placed under this Coordinating Board, the Council will consult each organized group or discipline, but it will have final authority.

The Committee is of the opinion that the Coordinating Boards in Dental Services, Nursing Services and Pharmacy Services each deal with a sufficiently small number of disciplines, that the role of the Coordinating Board and the Licensing Board of the supervising or senior profession might be combined. Nevertheless, this may not be desirable, if it makes the on-going role of the licensing board more difficult. A Coordinating Board might become unwieldy in size if it includes enough representatives of several disciplines so that they can carry out the function of evaluating credentials for licensure or of deciding the complex of a disciplinary problem, in addition to their primary role of coordination, formulation and review of standards and monitoring of the system. Nevertheless, the Council should explore with the Provincial Dental Board, whether the funtion of licensing and certification of all the disciplines can be carried out by a single co-ordinating board.

APPENDIX 9

Inventory dental manpower and project future dental manpower needs.

Nova Scotia, according to the lastest data is still plagued by a dentist-to-population ratio substantially higher than the national average. However, some progress has been made over the past decade in increasing the number of dentists available to the people of the province. The following table gives a general overview of the extent of dental progress in Nova Scotia over the past two decades.

Region	Ratio	1961	1971	1981
Canada	1	3,167	3,046	2,247
British Columbia	1	2,491	2,339	1,674
Ontario	1	2,536	2,544	1,969
Nova Scotia	1	3,879	3,687	3,104

(1) Hann, H.J., Dental Manpower Growth in Canada - How will it affect the dentists market place. (Ministry of Health, British Columbia, June 1982).
Note: Armed forces and full time teaching personnel excluded.

We can see from the table that Nova Scotia advancement has almost paralled the extension of dental services in the country as a whole, although the national ratio for the 1971-81 period showed a larger more marked change due to a massive increase in the number of dentists in Ontario and British Columbia.

APPENDIX 10

Dr. H.J. Hann in his 1977 report to the provincial government from Dalhousie indicated (using 1976 statistics) that to reach a ratio of 1:2520 by 1986 Dalhousie would have to feed 14 dentists per year into the system. The evident trends in the mid to late 1970's indicated that such a ratio was easily attainable. Considering that Dalhousie projects 34 graduates for 1981 and an increasing amount in the next decade, it would appear that Dr. Hann's conclusion might be borne out sooner than expected. Yet five years after his study, we are still 100 dentists short of the amount needed to equal the national ratio at this point in time.

It is possible to project future manpower needs with some accuracy.

Region	1981	2001	% increase
Canada	26,975,000	28,794,000	6.7
British Columbia	3,073,000	3,405,000	10.8
Ontario	9,980,000	10,753,000	8.5
Nova Scotia	913,200	947,600	3.8

Nova Scotia has a projected population of 913,200 by the year 1991. The projected ratio for Canada in 1991 is 1 dentist for every 2,033 people. A similar ratio for Nova Scotia would require a total of 449 licensed dentists by 1991 from the present total of 273 - an increase of 176 or about 18 dentists per year continuing attrition.

APPENDIX 11

PLANS FOR SENIOR CITIZENS IN OTHER CANADIAN PROVINCES

The following are quotations found in health services publications from several Canadian provinces concerning programs for citizens 65 and over.

Saskatchewan

". . . . . certain dental services and dental surgical procedures . . ."

Prince Edward Island

". . . . . certain oral surgery procedures performed by dentist where admission to hospital is required".

Quebec

"Oral Surgery and Dental Services Program allows all residents of Quebec to receive oral surgical services which are provided in a hospital for dental health reasons without cost. In addition, all social aid recipients may also be insured for a variety of preventative and restorative dental procedures".

Ontario

"Dental care in hospitals . . . . . dentist fees for specified list of procedures, are covered up to 90% of the Dental Associations schedule of fees . . .".

British Columbia

"Low income senior citizens receiving premium assistance who have lived in British Columbia for 12 consecutive months are given 100% coverage for basic dental services and partial dentures up to $700.00. Those elderly who do not qualify for premium assistance are insured for 50% of these benefits. Senior citizens in these categories will receive a special Dental Care Plan identification card. Participating dentists bill the Ministry directly for the cost of the patient's treatment".

Alberta

"Extended Health Benefits Program . . . is offered to all eligible Alberta residents who are 65 and over, and to their spouses. This Plan insures many seniors which are not covered by the Alberta Health Care Plan and Alberta Blue Cross, including:
. . . dental services such as fillings, extraction, partial or complete dentures and repairs not exceeding a cost of $1,200 for two consecutive years".

APPENDIX 12

MINISTER OF NATIONAL HEALTH AND WELFARE

Ottawa, September 1979

In this year of the Child, tooth decay is still a widespread and costly disease. Fluoridation of public water supplies is the most effective and inexpensive method of combatting it.

Canada has had successful experience with fluoridation for 34 years only 46 of every 100 Canadians on public water supplies could have this benefit are receiving it.

For a great many years the Department has been satisfied with fluoridation's safety and benefits.

I have no hesitation therefore in advocating the widest practicable implementation of this public health measure by the authorities responsible for community water supplies in Canada.

MINISTRE DE LA SANTE NATIONALE ET DU BIEN-ETRE SOCIAL

Ottawa, Septembre 1979

En cette Année internationale de l'Enfant, la carie dentaire demeure un mal coûteux et largement répandu. La fluoration des approvisionnelments publics en eau est le moyen le plus efficace et le plus économique de combattre ce problème.

Depuis 34 ans, le Canada procède avec succès à la fluoration de l'eau; cependant, seulement 46 pour cent des Canadiens qui sont approvisionnés en eau par le système de distribution public profitent réellement des bien faits de la fluoration.

Depuis bon nombre d'années, le Ministère est persuadé que fluoration de l'eau une mesure sécuritaire et salutaire.

Je n'hésite done aucunement à recommander aux autorités responsables de l'approvisionnement communautaire en eau au Canada de généraliser le plus possible l'application de cette mesure d'hygiène publique.

David Crombie

David Crombie

APPENDIX 13

Rational Dental Care In the Long Term Care Facility

By James D. Beck, Ph.D and
Ronald L. Ettinger, B.D.S., M.D.S.

This paper describes the complexity of delivering dental services to patients in long term care facilities. The roles of the dental team in conjunction with the staff of the facility, are discussed in light of providing rational dental care. A mobile geriatric dental program is described, along with the types of dental problems most often seen in geriatric patients. Factors that must be weighted by the dentist, the nursing director, the aides and the administrator in providing appropriate care are identified.

If asked, most directors of nursing in a long term care facility would say that each resident in the facility has a written individualized plan of care developed by the nursing staff in accordance with the orders of the resident's physician.

This plan would include all aspects of care, such as personal hygiene, medication administration, diet therapy, rehabilitative therapy and psychosocial needs. Oral and dental care needs inevitably will be missing.

Why is dentistry excluded from comprehensive care? It is because physicians, nurses and the public do not consider dentistry an essential part of the health service, but rather a luxury? Is it that the old myth is still alive that all old people are "toothless" or wearing dentures and thus do not need dental care? It has been estimated that dental conditions in the United States account for

- 84 million hours per year lost from work

James D. Beck is the department head for Preventive & Community Dentistry at the University of Iowa College of Dentistry. Ronald L. Ettinger is a professor with the Department of Removable Prosthodontics at the University of Iowa College of Dentistry.

- 7 million acute dental problems each year, or 3.3 per 100 Americans
- 25 million days of restricted activity because of dental problems for 12.1 per 100 Americans
- 8.8 million days spent in bed.

If it were any other disease, would the public and the other health professions ignore it? Why has this happened to dentistry—especially in our long term care facilities? For the institutionalized elderly it has been estimated that over 60 percent are edentulous, that approximately 90 percent need some type of dental care and about 70 percent are treatable. There is an enormous backlog of need.

Dental neglect of the elderly has been related to ignorance of dental conditions and fear of treatment. Not only is the elderly person or the family unaware that he or she can be treated, but often health professionals, especially physicians, do not recommend dental care.

The health care of the elderly is usually coordinated by a physician, and since dentistry falls outside of this sphere of direct influence and control, the dentist often has not been part of the coordinated effort to maintain the total health of the elderly.

Nursing home personnel are busy. Most of the day to day care is carried out by nurse aides, many of whom are themselves in need of dental care. Thus, oral health care for their patients is not high on the priority list. In addition, **there is no tradition of monitoring oral and dental health care as there is with medical needs.** Therefore, dental care will only be sought by the patient or the staff if there are complaints of severe discomfort or pain.

When such an acute episode occurs, there is a related myth that dental solutions are simple, i.e, "fill the tooth or extract it and when enough teeth are lost, replace them with a denture." The facts are that with medically compromised elderly, simple complaints may be manifestations of more complex problems.

Consider the following example: the nursing director calls the dentist to come and see one of the residents, an elderly lady who is wearing complete dentures and who has been complaining of a sore mouth. Some fo the possible problems this situation might create in treatment are:

1. It could be that some food has slipped beneath the dentures during eating and traumatized the tissues. Simply removing the irritant will result in a cure.
2. It could be that tissue change has occured beneath the dentures, and this has caused trauma. Simple adjustment of the dentures may resolve the problem.
3. It could be that a root fragment of tooth buried in the bone has become exposed. Extraction of the root fragment of tooth and relining of the denture may solve the problem.
4. It could be that the dentures are cracked or broken. Unless they are beyond repair, this is not a difficult problem to solve.
5. It could be due to an oral manifestation of a systemic problem related to absorption of nutrients from the diet. If she had an iron deficiency anemia or a Vitamin B deficiency, her tissues might be so fragile that she wouldn't be able to tolerate her denture and complain of a sore mouth. Local palliative dental treatment would not solve the problem.
6. It could be due to a severe hormonal inbalance, such as estrogen deficiency. The alleviation of the real problem in this situation would require the correction of the systemic deficit.
7. It could be due to tension of a nervous habit, such as clentching of the teeth. Even on very healthy tissues this will create soreness and pain, so treatment must be aimed at the causes of the tension.
8. It could be due to mental status. Depression can be manifested in the mouth as pain, which is not uncommon in the elderly. In fact, oral discomfort may be one of the first symptoms of depression. Palliative dental care may help, but it will not solve the problem.
9. It could be that she no longer has the neuromuscular coordination to manipulate her dentures (which don't fit very well) and she just can't hold them in place anymore. Therefore, the dentures are moving around her mouth and creating trauma. Treatment will require relining or remaking the dentures, depending on their status.
10. It could be her general health status. If she is debilitated or depressed, then she won't have the ability to maintain healthy oral tissues, as oral health is dependent on general health.
11. It could be due to an infection of the oral tissue by *candida albicans, a commensal fungus of the mouth which becomes when the oral environment is compromised. Treatment must include decontamination of the dentures and the use of topical antifungal agents, such as mycostatin.*

Thus a simple oral complaint may not have a simple solution and may be the manifestation of a greater systemic problem which requires the dentist to work with the physician caring for the patient.

Geriatric Dental Training

A number of studies have shown that dentists and dental students, like many other groups responsible for the care of aged persons, have negative attitudes towards them and show little interest in working with older people.

The University of Iowa College of Dentistry has developed an interdisciplinary undergraduate dental curriculum focusing on the special physical and psychosocial needs of the aging patient and methods to meet these needs of the aging patient and methods to meet these needs with the aid of the grants from the Health Resources

Administration, the local agency on aging and the local community action program.

The curriculum occurs over four years of instruction, utilizing didactic and clinical approaches to learning. For senior dental students, it culminates with treatment of nursing home patients using portable dental equipment. Focus of instruction is upon the special needs of the elderly in the primary health care system and proposed methods to deal with these needs.

In the senior year, during four weeks of their extramural programs, approximately a third of the class serve on a mobile dental unit which treats patients in long term care facilities. At any one time, three students are assigned t the unit, supervised by a fulltime faculty instructor. The students on this unit carry out comprehensive dental care on a fee for service basis.

The geriatric mobile unit is a 25 foot long trailer containing a panoramic X-ray machine, a dental operatory and a small laboratory. In addition, the unit has two portable chairs and protable X-ray equipment which permits comprehensive treatment of patients within the facility.

A nursing home wishing to participate in this program contacts the College of Dentistry and a faculty member discusses the program with the home. After arrangements have been made, a dental hygienist visits the home and does a screening of the residents. From this screening, the dental team can estimate the cost of treatment for each patient.

At this point, the nursing home administrator contacts the resident's guardian or family for permission for treatment and payment. Once approval has been obtained—which usually takes four to six weeks-the dental team comes to the home with its equipment to do a complete examination and carry out the necessary treatment.

Dental Problems of the Elderly

The staff of a long term care facility usually are well trained in medical problems of their patients. However, we have found that they usually have had no training with regard to the specific dental problems of these elderly persc ns. The dental problems encountered in long term care facilities by the dental team can be summarized as problems related to:

- oral hygiene
- caries and the restoration of teeth
- periodontal disease
- dental related problems
- oral manifestation of systemic diseases and drug induced dental diseases
- oral cancer

Oral Hygiene

If the remaining natural dentitition is to be preserved, oral hygiene must be maintained. Proper treatment planning requires an assessment of the social and environmental supervision of the patient. For expediency in assessing potential oral hygiene problems, patients can be divided into three general categories:

Category 1—This group consists of persons who have sufficient heuromuscular coordination and motivation so that oral hygiene aids can be modified for their use in cleaning their own teeth or dentues independently.

If a person has had cerebral palsy, multiple sclerosis, spinal cord indury, Parkinson's disease, severe arthritis or a cerebrovascular accident, he or she may be unable to control a toothbrush unless the size and weight of the brush handle is increased.

If a person has limited arm movement at the shoulder due to accident or disease, the length of the handle of a toothbrush can be increased.

If a person is wearing any kind of a denture and has lost the length of one arm, either due to amputation or disease, independent cleaning of dentures is impossible. Suction cups attached to the base of a brush will help restore independence.

In all of these instances, once adequate oral hygiene levels have been attained, dental care becomes routine.

Category 11—Persons in this group have poor or inadequate neuromuscular coordination and require daily assistance to maintain their oral hygiene at an acceptable level.

If such a person has a concerned or caring family member or a reliable attendant to help with oral hygiene, dental care and treatment generally will require no special considerations. However, the family or the attendant will require training in specific oral hygiene techniques applicable to that person.

Category III—This group consists of persons with poor or inadequate neuromuscular coordination, who are unable to maintain their oral hygiene and receive no regular help.

The persons in this group often have some mental disabilities which can be congenital or acquired, such as cranial trauma, cerebral anoxia, encephalitis, brain tumor, cerebrovascular accident or chronic brain syndrome. The residents in this group also can include adult retarded patients who have outlined their families and so have been institutionalized.

Although it is easier to extract all teeth in these persons and place them on a soft diet, each individual should be assessed independently to evaluate the value of maintaining some sound teeth. If the dental history indicates a continuous and progressive deterioration of the teeth and the penodontium, rendering them edentulous may be the treatment of choice. Constructing a complete upper denture only to restore some aesthetics may be a great service for selected patients.

In any nursing home, the management of dental hygiene for dependent patients usually is carried out by the nurse aides. Unless these nurse aides are convinced of the value of a natural dentition and dental care, they will not make the extra effort to add this chore to their work load. Therefore, in service training of nursing home personnel is of great importance to the dental health of the home's residents.

Caries and Restoration of Teeth

The teeth of elderly persons may be worn and abraded due to incorrect overzealous brushing with a hard brush, the long term effects of abrasive foods or nervous habits such as grinding the teeth. The loss of thinning of enamel on the teeth makes them more susceptible to dental decay or caries.

Dental caries is a disease of the calicified tissues of the teeth resulting fromt he action of microorganisms on fermentable carbohydrates and characterized by decalcification of the inorganic portions of the teeth, accompanied or followed by disintegration of the organic material, resulting in a cavity or breakdown of the teeth.

Caries in the elderly are different from those observed in the adult or young patient. In the elderly, it is mainly root caries and increases after the age of 70. The causes of this form of caries have not been fully identified. However, a number of factors have been discribed, such as:

- changes in the taste buds of the tongue which may cause dietary changes, especially an increase in sugar intake
- fibrous and atrophic changes in the salivary glands which decreases their functional reserve so that the volume of salivary secretion is decreased and may be accompanied by changes in its constituents; if the patient is also taking medications with xerostomic potential, the salivary flow may be functionally compromised.
- loss of dexterity resulting in poor oral hygiene
- gingival recession which exposes cementum, which seems to be less resistant to caries than enamel.

Root abrasion and caries can be among the most difficult lesions to treat, because the lesions often run around the circumference of the tooth and an effective restorative material does not exist. At this time, prevention in the form of good oral hygiene, the use of artificial saliva where required and topical fluoride therapy to increase resistance to decay is the treatment of choice for all elderly dental patients.

Periodontal Disease

The diseases which affect the supporting structures of the teeth increase with age. If fact, between the ages of 35-70, the majority of teeth lost are due to periodontal disease. It has been estimated that over 90 percent of elderly with natural teeth have periodontal disease, while less than 5 percent of these persons received treatment in the

past year. Although it is not possible to repair the bone loss caused by periodontal disease, with good daily oral hygiene it is possible to prevent further progress of the disease.

Denture Related Problems

An elderly person using a denture effectively must:

- have tissues capable of supporting the dentures so that they are able to tolerate the low grade trauma induced by the movements of every denture in function
- have the motivation to persist in learning how to use these potentially traumatic, mandate substitutes for natural teeth
- have sufficient neuromuscular skills to be able to do it.

If a person has to persist in wearing a denture at the conscious level (one always begins wearing a new denture a the conscious level), it then becomes intolerable. The control for this is thought to be exercised through the alpha-motor neuron system directly from the cerebral cortex.

If the person cannot, in a shor period of time, switch to the unconscious level or the reflex level believed to be the fusimotor muscle spindle loop system, he or she will reject the dentures.

For this reason it is necessary for the dentist to ask for help from the nursing home personnel who are familiar with the patient, to assess motivation and neuromuscular ability and especially the ability for speaking or eating with whatever dentures are possessed.

For elderly debiliated patients, it is important to create as little change as possible and to do it in a series of gradual steps.

As every denture is potentially traumatic, all of them should be removed for at least six to eight hours per day to allow the denture bearing tissues to rest. All dentures should be marked for identification in case they are lost or misplaced. It is important also for the gum tissues to be massaged with a soft toothbrush at least once daily.

Oral Manifestations of Systemic Diseases and Drug Induced Dental Disease

There are approximately 200 systemic diseases and drugs used to treat them which have oral manifestations. Following are a few key points.

Xerostomia

In medically healthy older persons, there often are degenerative changes in the salivary glands. If this functional reserve is compromised by disease or drugs, the consequences are a loss of cleaning and washing action, decrease in the lubrication of the mouth and decreased bacteriostasis.

Swallowing, tongue mobility and the wearing of dentures can become difficult. There is an increased rate of cervical caries and an increase in plaque formation and periodontal disease. The changes usually are slow and progressive and vary in intensity from patient to patient, but can be accelerated by many drugs commonly used by the elderly. These drugs are listed in order of severity of the xerostomia they may produce.

1.	Anticholinergics or antispasmolytics	- Banthine, Bentyl, Donnatal
2.	Antihistamines	- Chlor-trimeton, Benadryl
3.	Major tranquillizers	- Thorazine, Mellaril
4.	Antidepressants	- Lithium, Elavil, Tofranil
5.	Antiparkinson	- Cogentin, Artane, Levodopa
6.	Antranxiety	- Atarax, Miltown
7.	Opiates	- Lomotil, Doxine
8.	Antihypertensives	- Reserpine, Aldomet, Ismelin
9.	Diuetics	- Diuril

Physicians should be made aware of the oral side effects of the drugs they are prescribing. If side effects are noticed, the dentist or nursing director should inform the patient's physician and suggest that drug dosages might be adjusted or changed. If this is not possible, the dentist should help in the treatment of the induced xerostomia. Unfortunately, the effect treatment of xerostomia in the elderly is difficult, but a multifaceted approach may be successful.

Alleviation of Xerostomia

1. *Dietary Patients* should be advised to avoid dry and bulky foods, spicy or acidic foods, alcoholic beverages, carbonated beverages or tobacco. A high fluid intake should be encouraged unless it is medically contraindicated.
2. *Environmental*—Maintenance of optimal air humidification in the home is useful, especially during sleep, as is using Vaseline to protect the lips from drying.
3. *Dental*—The dentist should ensure that all sharp cusps of teeth or irregular fillings are smoothed and that dentures are checked and adjusted for irritaions.
4. *Saliva Stimulation*—Cholinergic drugs such as pilocarpine and neostigmine bromide may be tried unless medically contraindicated. Drug therapy is not effective if the cause of the xerostomia is related to an underlying disease or metabolic state for which there is not specific therapy, such as: radiation of the salivary glands during the course of treating malignant neoplasms; autoimmune disease, the most common being Sjorgens syndrome; or side mune disease the most common being Sjorgens syndrome; or side effects of other drug therapy.
5. *Temporary Palliation*—Mouthwashes, especially those containing glycerol, can be useful to alleviate oral discomfort. However, an artificial salvia which can be put in an atomizer and carried by the patient for use as required has proven useful.

Oral Candidiasis

In the endentulous patient, an induced or acquired xerostomia predisposes the patient's tissue beneath the dentures to ulceration and infection. *Candida albicans* is a normal commensal of the mouth in about 60 percent of healthy individuals. However, if the oral environment undergoes change due to local or systemic causes, this commensal fungus may become pathogenic.

Among the elderly, there are many predisposing factors to oral candidiasis, some of which are:

- endocrine disorders—diabetes and hypothyrodism
- malnutrition & malabsorption syndrome-iron deficiency anemia, post gastrectomy and alcoholism
- drugs depressing defense mechanism-immuno suppressives, cortico steriods, cytotoxic drugs and radiation therapy
- drugs changing oral environment-antihypertensives, diuretics
- malignant diseases-leukemia and agranulocytosis.

The use of topical polyene antibotics such as mycostation and amphotericin B and the newer drugs such as miconazole are useful in the treatment of oral candidiasis, but the treatment of chronic candidiasis is difficult.

Treatment of the underlying disease is of primary importance, followed by elimination of the local complicating factors. Thus, the care of these patients requires the dentist and physician to work together closely.

Oral Carcinoma

For the elderly person, oral carcinoma are extremely significant. It has been estimated that there were 25,500 new cases of oral carcinoma in 1980, which was 3.2 percent of all cancers, and of these 35 percent will die within the year. The peak incidence of oral cancer is in persons aged 50 to 70 years.

Group IV Hospitalization or No Treatment

This group of persons should only have emergency treatment for pain or infection because of their severe retardation, severe organic brain syndrome, extreme ill health or terminal illness. This group also includes persons who have aggressive or unsocial behavioral problems

which cannot be modified by drug therapy and may require treatment under general anesthesia in a hospital.

Squamous cell carcinoma is the most common malignant neoplasm of the oral cavity and comprise about 90 percent of all oral malignant tumors. Well over 75 percent of these tumors occur in the age group of 50 years and older. The sites of predilection of oral carcinoma vary, but generally in decreasing order of occurence they are: the lower lip, the tongue, the gingiva, the floor of the mouth, the palate and the tonsillar area.

Oral malignant neoplasms usually are not painful in the early phases and are easy to ignore or miss. Pain occurs only in the more advanced stages, when the sensory nerves are involved, as when there is secondary infection of the ulcerated mucosa.

For prevention, all residents of a home should be examined by a dentist on a yearly basis. However, the staff of a care facility always should be on guard to the possiblity of malignant changes of their elderly patients. The basic signs of oral carcinoma have been described as:

- ulceration loss of continuity of the mucosal surface
- induration—hardness of a lesion on palpation
- fungation—verrucous or cauliflower like surface
- elevation—all or part of the lesion above the normal level of the surrounding mucosa
- fixation—attachment of the lesion to the deeper structure, with loss of mobility.

Planning for a Dental Program

For purposes of dental management, elderly institutionalized patients can be grouped into four broad categories.

Group I The Healthy Ambulatory

This group consists of those persons who are arbulatory, independent and relatively healthy. The dental treatment of these elderly is not fundamentally different from any other age group, except that one may not wish to stress them by long appointments or keep them supine in a dental chair for long periods of time. There are very few of these persons in long term care facilities, except for a few elderly widowers who have no living relatives and are unable to maintain an independent household.

Group II The Medically Compromised

This group consists of patients who are medically compromised but who, with aid, are able to visit the dentist's office. If these patients are to be seen in the office, the dentist must evaluate the office for architectural barriers. Most of these persons will have multiple medical disorders or will be taking drugs which put them at risk for loca anesthesia or minor oral surgery. These persons usually make up the the intermediate care group of many long term care facilities.

Group III Homebound

This group of persons are those who should not be transported and need to be treated in their place of residence. This group consists of persons who are bedridden, very frail or debrilated, as well as those who are incontinent, catheterized or mentally disturbed by travel. These persons should be treated in the long term care facility, and many of them fall into the category needing skilled nursing care.

Most patients in long term care facilities have multiple health problems which require the cooperation of all concerned with them care and team approach to the amelioration of their problems.

Dentists have a specific role on this team because the can improve the quality of life for the elderly by keeping them free of oral infection, restoring their dentition so they can enjoy eating and restoring facial aesthetics and morale.

It should be obvious by now that dental care for these patients is a complicated process. The dental team must consider many extenuating circumstances in prescribing the type of treatment that each patient needs. It is essential that the concept of "rational dental care" be emphasized in dealing with the institutionalized elderly.

The dental team must take into account the patient's life span, medical history, drug history, mental status, mobility status, neuromuscular coordination, dental status, previous dental experience, dental expectations and economic status.

On top of this, the dental team also must assess its own skills, the facilities in which it is working and the availablity of equipment to carry out the dental procedures that may be required. Only when all these considerations are taken into account will rational dental care for each patient be provided.

Rational dental care for one patient may be no treatment whatsoever and for another the most technologically sophisticated care that dentisty has to offer.

Conclusion

If long term care facilities are interested in providing total care to their residents, they should have an oral health policty which promites rational dental care for their residents through a combined effort of the dental team and the nursing home staff. The following policy should be considered:

1. The routine oral examination by a dentist on admission to the nursing home—preferably the resident's own dentist—and treatment carried out with the following priorities according to the physical and psychological ability of the resident to receive care:
   - relief of pain and treatment of acute infections
   - eliminatin of pathological conditions
   - extraction of unsavable teeth or roots
   - removal of irritating conditions which may predispose to malignant change in the area
   - initiation of oral hygiene procedures
   - treatment of bone and soft tissue disease
   - replacement of teeth and restoration of function.
2. All residents of homes should be examined by a dentist at least once every year, with particular attention given to the detection of possible malignant lesions. This examination should be done in conjunction with the nursing director, who can supply the relevant medical information that is needed.

For ambulatory residents, this may be periormed by their own dentist in the dentist's office. For residents who cannot be moved, it should be done in the long term care facility and rational dental treatment should be initiated.

3. To maintain the oral health of the residents:
   - the dentist or dental hygienist should conduct inservice training or nursing home personnal so that they may help alert the dentist of any changes in the resident's ability to chew or the presence of any oral lesions.
   - the dentist or hygienist should provide individual patient oral hygiene plans for staff so that they may be worked into the daily routine
   - the cleaning of teeth or dentures should be regularly performed, preferably by the residents, but if they are incapable, then by the staff
   - the staff should be responsible for seeing that residents remove their dentures while sleeping.
4. The dentist or hygienist should provide the staff wth training in the marking of all oral appliances with the resident's name or an appropriate number.

Dentistry in the long term care facility must be an essential part of the daily routine. If practiced in a rational manner, it will be a valuable adjunct to the lives of the residents. If the care is not delivered rationally, it probably will be a waste of time and money, and will not impact upon their quality of life.

APPENDIX 14

HALIFAX SENIOR CITIZENS' HOUSING CORPORATION LIMITED

. . .a not-for-profit, non-governmental community based citizen' organization

IMPORTANCE OF DENTAL CARE IN A HOME FOR SPECIAL CARE

by: Edward L. Roach, Executive Director

Preventive dental care and treatment of Residents in Homes for Special Care is an essential part of the total health service for them.

In the past, considerable attention has been placed on the medical aspects of chronic illness of the aged, with very little attention to dental health care needs of the elderly, particularly the institutionalized and home bound chronically ill and aged persons. The question being how to make available preventive dental care available to this group.

In 1977, Northwood, in response to this identified need with the help of Dr. Alexander MacLeod, D.D.S., of the Medical Arts Dental Group, developed, designed and built into the Home a fully equipped dental clinic. The Housing Corporation entered into an arrangement to provide Northwood a preventive dental care and treatment program with Dr. Charles Oler who is leaving with some reservations to take up a new position in Ottawa after some 25 years of private practice in Halifax.

Under this program all newly admitted persons to Northwood are required to have an oral examination within 30 days of admission and annually thereafter. The initital examination and assessment calls for taking care of any remaining natural teeth, determining if dentures need repair or re-fitting, examination of soft tissues for any change in anatomy to detect oral malignancies or other disease symptoms.

To date, representations and discussions with Provincial Department of Social Service and Halifax Commuity Care for the Elderly concerning the financing of the "preventive dental care" as a shared cost service relative to the assessment of dental conditions of Residents that may become chronic if uncorrected has been unsuccessful.

However, not withstanding the funding difficulties of hte preventive aspect of this badly needed program, the Halifax Community Care for the Elderly does provide more than adequate funding for "crisis" intervention in the treatment of dental problems and for dentures.

The Housing Corporation has not given up its efforts to have government accept this preventive dental assessment need as a sharable cost service and again are requesting approval of this service in our 1982 budget estimates.

Wednesday, October 27, 1981.

APPENDIX 15

HALIFAX CHRONICLE-HERALD Nov. 1, 1982

DENTISTS "headed for hard times"

The dental industry in Nova Scotia may be in for some hard times over the next three to four years, says the president of the Nova Scotia Dental Association. (NSDA).

Gerald Turner said Tuesday an increasing number of graduates flooding into the market will "cause difficulties" for themselves, and for many already finding the market tough.

More than half of the province's 300 dentists ar in Halifax-Dartmouth, and Dr. Turner said the market "just can't support any more" under existing conditions.

According to Dr. Turner's statistics, getting Nova Scotians to go to their dentist, even for "free", is about as easy as pulling teeth. That he attributes to two factors: lack of disposable income and government cutbacks, both as a result of the current economic crisis.

Only 30 percent of Nova Scotia residents see a dentist regularly - on a six month or yearly basis.

Only 62 percent of those eligible for MSI's child care program, which provides a limited degree of free services to children born since January 1, 1967, attend the dentist even on an annual basis.

On top of about $1.08 million government cutbacks affecting the dental industry, the province recently imposed a 16-year age limit on the child care program, effective this January. That alone will mean a loss of $150,000 to dentists, and Dr. Turner said the implications extend much further than that.

Along with $400,000 in cuts to orthodontic services, including space retaining, cross bite correction and bad habit elimination programs, the cuts represent for Dr. Turner major sacrifices in dental health throughout the province.

Dentists will still offer the programs, but without government funding and in difficult economic times, the number taking advantage of them will be severely limited.

The report of the province's three-man Dental Services Review Commission is due at the end of next month. The 18-month project is into the final stages of assessing dental services in Nova Scotia and making recommendations pertaining to future policy towards the industry.

APPENDIX 16

Nova Scotia Dental Association

2746 DUTCH VILLAGE ROAD, SUITE 206-208
HALIFAX, N.S. B3L 4G7
TELEPHONE 902-454-5448

September 30, 1982

Mr. Jack D. Walker
Chairman
Dental Services Review Committee
Toronto Dominion Bank Building
4th Floor
1791 Barrington Street
Halifax, Nova Scotia
B3J 2R7

Dear Jack:

Thank you for your letter of September 10, 1982.

Your question as to the optimum number of graduates per year from Dalhousie Dental School is almost impossible to answer definitively. To answer definitively we would have to know whether the present demand is being met, and we would have to know what the future demand will be. To our knowledge, there are no studies completed, underway or planned which would provide concrete data as to future demand. To complicate this further the lag time between enrollment in and graduation from Dental School may allow demand factors to change. This phenomenon would alter supply side requirements.

With regard to present demand, the Nova Scotia Dental Association perceives manpower maldistribution and now manpower undersupply. In recent years there have been fewer and fewer communities which could be categorized as underserviced. This progress has been realized during a period when Dalhousie has been graduating 24 dentists each year.

We are most concerned that an increase in the number of graduates will do nothing but cause an oversupply of dentists in areas presently well serviced and not necessarily lead to any significant reduction in the number of unserviced or underserviced areas. We cannot say that 24 graduates per year is optimum, but 24 graduates per year reasonably ensures that Nova Scotians have access to dental treatment while maintaining the vitality of the profession under present conditions.

Currently, there appears to be an undersupply of Hygienists in the province. We cannot, for the same reasons as outlined above, identify the optimum number. We do feel that an increased class size for the next two to three years would address this undersupply. At this time future class sizes must be reassessed.

Although the optimum number of Dental Assistants required each year cannot be identified the current class size appears sufficient.

In summary, for the benefit of Nova Scotians, officials must closely monitor all class sizes to prevent dislocations caused by oversupply or undersupply.

Hopefully, this commentary will be of assistance to you in your deliberations.

Yours truly,

NOVA SCOTIA DENTAL ASSOCIATION

G.G. Turner, D.D.S.
President

APPENDIX 17

Nova Scotia Dental Association

2745 DUTCH VILLAGE ROAD, SUITE 205-206
HALIFAX, N.S. B3L 4G7
TELEPHONE 902-454-5448

November 18, 1982

Mr. J.D. Walker, Chairman
Dental Services Review Committee
Toronto Dominion Bank Building
4th Floor
1791 Barrington Street
Halifax, Nova Scotia
B3J 2R7

Dear Jack:

Thank you Mr. Walker, Mr. Baxter and Mr. Stevens for meeting on October 6, 1982 with me, Dr. Mervyn Creighton, Dr. Dave MacLeod, Dr. Rod Fraser and Mr. Don Pamenter as representatives of the Nova Scotia Dental Association.

The Nova Scotia Dental Association believes that for people of Nova Scotia to obtain high quality dental care they must be protected. Protection implies two concepts. First, aspirants to the dental delivery system must receive high quality training. Second, some mechanism must exist to guard against any potential human failing when these practitioners begin to service the dental needs of the public of Nova Scotia. These two concepts are not mutually exclusive. Indeed, they are interdependent and must operate in conjunction if the people of Nova Scotia are to enjoy high quality dental care.

With public protection in mind, participants entering the dental care delivery system in Nova Scotia must meet the following criteria:

High quality training criteria:

1) their training must take place within the confines of an accredited post-secondary educational institution.

2) their training program must be periodically accredited by the appropriate regulatory body. In the current structure the appropriate body would be the Provincial Dental Board of Nova Scotia.

3) the curriculum for their program must be approved by the appropriate regulatory body.

4) all students must successfully complete the training program in order to be licensable.

These are the post graduation public protection criteria:

1) a Peer Review mechanism must be in place.
2) a manual outlining Standards of Practice and Code of Ethics must be established.

Incidentally, knowing these criteria exist will tend to foster confidence in the deliverers of dental service.

To expand on the above points, we emphasize that the Nova Scotia Dental Association perceives both the accredited education institution and the appropriate regulatory body as existing **Now.** In principle, we agree with your committee's concept that all auxiliary and ancillary personnel connected with the delivery of dental care to Nova Scotians should be trained within a single accredited education institution. This, of course, includes denturists. We agree with your suggestion that the present Dalhousie School represents the ideal training facility.

But before obtaining this training facility, your committee must, as a first step, seek to establish an overall regulatory body. That body, in the opinion of the Nova Scotia Dental Association, already exists. It is the Provincial Dental Board of Nova Scotia. The Board, under current legislation, has jurisdiction over the practice of Dentistry, Dental Hygiene and Dental Assisting. This body currently accredits dental training facilities, approves curricula, oversees Peer Review procedures, and establishes Standards of Practice and Codes of Ethics. Hence the Provincial Dental Board manifests the mechanisms required to protect the public of Nova Scotia.

With these protection mechanisms now existing, logic suggests that the Provincial Dental Board be expanded in scope to include **All** dental delivery personnel including denturists. This broading in scope implies changes. These changes may include a name change and a membership change to better reflect the expanded parameters of the Board. Such alterations require innovative thinking and hard work on the part of all involved parties.

Thank you for your keen interest in the dental health of the people of Nova Scotia. Because your committee and the Nova Scotia Dental Association both remain committed to the improvement of **All** Nova Scotians' dental health, we stand prepared to help you in any way with your deliberations.

Yours truly,

Gerald G. Turner D.D.S.

NOVA SCOTIA DENTAL ASSOCIATION

G.G. Turner, D.D.S.
President

APPENDIX 18

Dental Services Review Committee
Toronto Dominion Bank Building,
4th Floor
1791 Barrington St.,
P.O. Box 575,
Station M,
Halifax, N.S.
B3J 2R7

Dear Mr. Walker:

The proposed recommendations of your committee were discussed at the annual meeting of the Nova Scotia Dental Technicians Association, October 23, 1982. The concepts were unanimously accepted but further clarification was felt necessary in the following areas:

1. Unification of all dental training facilities —
   Questions arose as to the structure of the programme and who will be responsible for their design and administration.
2. Oral health board -
   The structure and membership of the board and appointing body was of concern to Association members.
3. One registrar -
   The qualifications of the registrar and the appointing body were questioned.
4. Mandatory formal training for technicians -
   Laboratory owners in particular felt that if the Nova Scotia Institute of Technology programme were to replace apprenticeship, it would have to be improved and lengthened to at least three years duration.

I would be pleased to discuss these concerns and the specifics of your recommendations with you at your convenience.

Sincerely,

D. Wayne Banfield, R.D.T.
Past-Pres., N.S.D.T.A.

APPENDIX 19

CHAIRMAN
D. LLOYD PATTERSON
REGISTRAR & TREASURER
HAROLD J. COLYER
CORPORATE SECRETARY
PETER J. MACKEIGAN

P.O. Box 8772
STATION A
HALIFAX, N.S.
B3K 5M4

NOVA SCOTIA DENTURIST
LICENSING BOARD

Dec. 26th. 1982.

J.Walker,
Chairman,Dental Review Commission,
Halifax N.S.

Dear Sir;
Following our telephone conversation I checked and found that the chairman of "The Denturist Licensing Board Of Nova Scotia" altho instructed to do so, failed to submit a letter expressing the boards opinion,re services in association with oral health facilities in the province of Nova Scotia.

Altho the above is not associated, a new chairman has been appointed,Douglas Yorke former manager of The Gestetner(Canada) Ltd.

My attitude is that the board should be self sustained financially, altho records kept by the previous administration projected as high as $94,000.00 per year.Under the present administration the cost to the government has been in the vicinity of $40,000.00 per annum. This year ending Mar 1/83 the currently appointed board will have operated at cost "ZERO" .

No examinations or services have been decreased.In actuality the present board has brought reason and common sense to the operation, revised the regulations and put new life into the educational pattern that had been next to dead for at least six years.

CHAIRMAN
D. LLOYD PATTERSON
REGISTRAR & TREASURER
HAROLD J. COLYER
CORPORATE SECRETARY
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NOVA SCOTIA DENTURIST
LICENSING BOARD

The above would suggest that no changes are necessary in either the Act as laid down in 1973 or the regulations which were rewritten approximately one and a half years ago.
Such is not the case,the following summary analysis suggests areas of study.

(A) At the moment fifty Registered Denturists plus two articling at Dartmouth are listed.At the present rate of production, it is suggested that in five years approximately sixty to sixty-four will be available to the public of Nova Scotia.

(B) It should be noted that the charges levied by the Denturists are board controlled, with due regard for the general publics ability to purchase a most necessary item at a price within their disposable dollar pay out.

(C) Any critical location factors re the Vocational School in Dartmouth,Denturists School only,should not be regarded as criticism of the teaching staff with due regard to the excellent senior instructional ability of Daniel MacAulay.

(D) The three principal locations re oral activity as associated with dentistry and it's support professions and trades are Leeds St.,Dartmouth Vocational School and the Dalhousie school of Dentistry
Leed St. seems to be very much involved in mechanical teaching functions.Dartmouth Vocational is working on a curriculum which barring minor changes is certainly on the right track. It is to be understood as denturism

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NOVA SCOTIA DENTURIST
LICENSING BOARD

(D) con't- expands in its scope of operations,more and more equipment will be required.This equipment requires additional space and a very substantial dollar investment to bring it up to the standard as practised at the Dalhousie School Of Dentistry.The attached equipment and raw product lists gives a brief idea as to the investment required.As as matter of fact taking into consideration the inflationary trend the actual dollar values expressed are approximately 30% lower than those currently in effect.(Estimate only).

(E) It is obvious that to maintain three schools all working on one phaze or another of the dental picture in the Halifax and Dartmouth area does not represent good business management.It is also obvious that the Dalhousie School Of Dentistry has every facility to train on a modern and efficient basis.Operational space is certainly available to train a great number of students over the current enrollment.No alternative, including NATIONAL,ATLANTIC or other means of study should be considered for Nova Scotia on the basis of the Halifax N.S. central location,as we have a prestige building catering to dentistry and technology without increasing the proportioned cost as now experienced and paid by the Dept.Of Education and the Nova Scotia Government through the Dept.Of Health.I do not believe that there any justification for individual schools and strongly suggest that the various segments involving dentistry be housed under one roof-IN OTHER WORDS AN UMBRELLA TYPE OF OPERATION.

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The above would suggest that no changes are necessary in either the Act as laid down in 1973 or the regulations which were rewritten approximately one and a half years ago.
Such is not the case,the following summary analysis suggests areas of study.

(A) At the moment fifty Registered Denturists plus two articling at Dartmouth are listed.At the present rate of production, it is suggested that in five years approximately sixty to sixty-four will be available to the public of Nova Scotia.

(B) It should be noted that the charges levied by the Denturists are board controlled, with due regard for the general publics ability to purchase a most necessary item at a price within their disposable dollar pay out.

(C) Any critical location factors re the Vocational School in Dartmouth,Denturists School only,should not be regarded as criticism of the teaching staff with due regard to the excellent senior instructional ability of Daniel MacAulay.

(D) The three principal locations re oral activity as associated with dentistry and it's support professions and trades are Leeds St.,Dartmouth Vocational School and the Dalhousie school of Dentistry
Leed St. seems to be very much involved in mechanical teaching functions.Dartmouth Vocational is working on a curriculum which barring minor changes is certainly on the right track. It is to be understood as denturism

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(F) Too thin a line is in evidence between denturism and dental technology and a programme should be laid on to bring these two segments closer together. The Dentists must realize that Denturism is here to stay. The manufacture of dentures, now professionely done, previously bootlegged for forty years or more. THERE IS NO POINT TO THE CEASELESS ANIMOSITY THAT SEEMS TO EXIST BETWEEN DENTISTS AND DENTURISTS--IT IS NOW TIME TO SET UP A GENERAL BOARD VERY HEAVILY REPRESENTED WITH LAY PERSONNEL SO THAT THE PUBLIC MAY BENEFIT BY REASONABLE AND CONTROLLED PRICES, TAKING ADVANTAGE OF THE DENTISTS SCOPE OF OPERATIONS AND THE DENTURISTS DENTURE SKILL.

although the writer is registrar for the Denturists Board Of Nova Scotia, this letter must be and should be regarded as the opinion of a private citizen, due to the fact that the original authorized submission was not presented by the past chairman of the board.

Yours very truly,

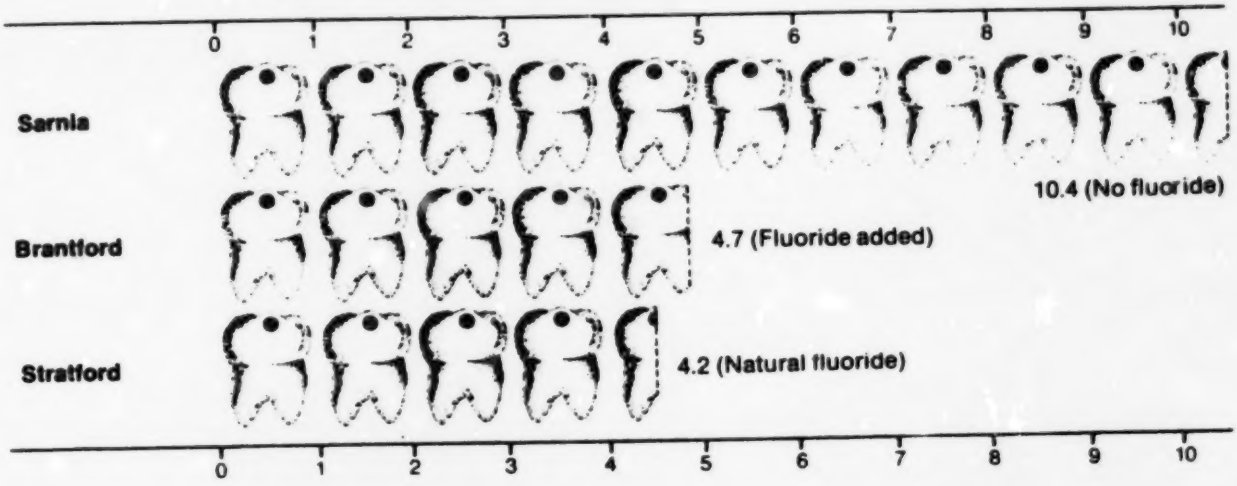
H.J.Colyer
32 Ravenrock Lane,
Halifax N.S.
B3M 3A1

APPENDIX 20

National Health and Welfare Health Services and Promotion Branch 1981

Illustration #24 **The benefits of water fluoridation — The classic Canadian study**

Average number of decayed, missing, filled permanent teeth per child.



Average number of decayed, missing, filled permanent teeth per child in the 16-17 year-old age group in Sarnia (non-fluoridated), Brantford (fluoridated) and Stratford, Ontario Canada (naturally fluoridated), 1963.

Source: Brown, H.K. and Poplove, M., Brantford - Sarnia - Stratford Fluoridation Caries Study: Final Survey, 1963. JCDA Vol. 31, No. 8, August, 1965, pp 505-511.

Dental Services Review Committee

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The Dental Services Review Committee acknowledges the contribution of many organizations and individuals in the preparation of this report.

We are pleased to mention the names of those people who have assisted us in our investigation and preparation. We sincerely hope we have mentioned all people. If we have omitted any individual, we apologize and emphasize it is not intentional.

We appreciate the interest shown by Mr. F.B. Wickwire, the Chairman of the Task Force Dental Care Services, published in 1972. His continued interest is indicative of the type of co-operation we received by all members of the first task force.

Thanks are expressed to Dalhousie University. To President Dr. Andrew MacKay, President Emeritus, Dr. Henry Hicks, Dean Ian Bennett of the Faculty of Dentistry, Dr. Robert Bingham, Dr. John Eisner, Dr. Wayne Barro, Dr. Doug Chayter, Dr. Donald Cunningham and Dr. Robert Hoare we express our sincere gratitude. We also recognize the assistance of Ms. Kaireen Vaison, Continuing Education Department, through whom we were able to attend six or seven week-end courses.

The Nova Scotia Dental Association was very co-operative towards our committee. We especially recognize the assistance and co-operation of past president Dr. David MacLeod, President Dr. Gerald Turner, and Executive Director Mr. Donald Pamenter.

The Nova Scotia Dental Board showed sincere interest in the dental service review. Dr. Jeffery Bagnell, Registrar, was one of special assistance.

The Nova Scotia Denturist Society was most courteous and helpful. Special thanks are extended to President Daryl Burton and past president Victor Forsythe and Mr. Darrell Mason.

Mr. Lloyd Patterson, Chairman, Denturist Licensing Board and Mr. H.J. Colyer, Registrar were great sources of information and guidance.

Ms. Kate MacDonald and Ms. Lisa MacDonald were excellent representatives of the Dental Hygienists.

We express appreciation to Dr. Robert Wilson and Mr. Neil MacKinnon who are responsible for the oral health programs taught at the Nova Scotia Institute of Technology.

Thanks are extended to Mr. Gerald O'Malley, Principal, Dartmouth Regional Vocational School and to staff member Mr. Arthur MacAulay.

The Technicians Society was of great assistance. Special thanks are expressed to Mr. Wayne Banfield.

The Nova Scotia Department of Health extended invaluable co-operation and advise. Special recognition is given to the efforts of Dr. Gerald Sheehy, Minister of Health, Dr. Harris Miller, Deputy Minister, Dr. Wayne Sullivan, Mr. Wayne Grady, Mr. John Hickman and Mrs. Margaret Murphy.

We thank the various political organizations, labour unions and interest groups for making every effort to inform the committee of their concerns and possible solutions.

Appreciation is extended to the mayors and clerks of towns who hosted our public hearings. We were received with dignity and kindness.

With reference to our own support staff we recognize, with gratitude, the loyalty and effort extended to the committee.

To all who assisted, we express our sincere gratitude and thanks.

J.D. WALKER

C.R. BAXTER, Jr.

M.D. STEVENS